An Address

ON

THE SYMPTOMS AND TREATMENT OF MOVEABLE KIDNEY.

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GENTLEMEN,—When asked by the medical secretary to open a discussion on moveable kidney my natural antipathy to take part in controversy disposed me to decline, but I consented on reflecting that the subject, though none of my choosing, is one upon the due and proper comprehension of which it is worth while to spend time and trouble.

I propose in the remarks which I am about to make to state in the first place what I understand by the term "moveable kidney"; secondly, to explain the great discrepancy of opinions as to the frequency of moveable kidney; thirdly, to describe how this mobility may be ascertained to exist; fourthly, to allude very briefly to the symptoms, diagnosis, and effects of moveable kidney; and lastly, to indicate the class of patients benefited by operative treatment.

WHAT IS TO BE UNDERSTOOD BY MOVEABLE KIDNEY?

Contrary to the inferences to be drawn from some of the many works on the subject, a certain degree of mobility is natural to the kidney. Surgeons accustomed to operate upon this organ frequently witness when the kidney is exposed in the living body that it has a limited movement in a vertical direction, descending with inspiration, and ascending with expiration. Deep inspiration and forced expiration increase these movements. This slight natural descent of the kidney in inspiration cannot be detected by palpation in every individual; in some persons the organ does not descend sufficiently to enable even its lowest pole to be felt on the deepest inspiration. This, however, is not tantamount to saying that every kidney which descends during inspiration, so that the smallest part of it can be felt, is a kidney the means of fixation of which are insufficient—that it is, in fact, a moveable kidney. Many cases in which the lower pole of the kidney, though beyond reach during ordinary respiration, yet comes within range of palpation during a full inspiration and returns on quiet expiration, are uncomplicated by symptoms and the range of their movement is simply natural. But a kidney is deficient in its proper means of fixity and must be considered abnormally moveable under any of the following conditions:—

1. When the whole kidney descends during deep inspiration below the examiner's fingers, on bimanual palpation.

2. When the whole or the greater part of the kidney so descends that it can be *felt* between the fingers of the two hands.

3. When the lower half of the organ so descends and can be so felt. In the cases in the third group and in some of those in the second group, the organ slips back again in expiration and cannot be *retained* between the fingers; but in many of the cases in the second group and all of those in the first group, the kidney can be retained between the fingers of the two hands, even after the patient has taken a full expiration. These three groups of moveable kidney, together with the cases above referred to, in which the kidney can be felt no matter to how slight a degree, on the deepest inspiration, are described by Glénard as "moveable kidney of the hypochondrium," or the "new form of moveable kidney" (*rein mobile nouveau*).

4. There is a group of cases in which the kidney is often out of position during natural respiration; and in some extreme cases in this group the organ may even be seen at a glance projecting the abdominal wall, or can be felt at once on simply placing a hand upon the front of the abdomen. This group includes the so-called "floating kidney." This is the group which Glénard calls "the moveable kidney of the flank and of the iliac fossa," or "the classical moveable kidney." If I understand him correctly, he actually believes that these last were the only cases known to or recognised by the profession prior to 1886, and he claims to have himself discovered all those varieties which he includes under the term, "the new moveable kidney" (*rein mobile nouveau*) by the employment of his own method of bimanual palpation—namely, the "*palpation néphroleptique*" as he calls it. But certainly for the last 20 years at least some of us in this country have been employing a method of palpation of the hypochondrium very similar to his own, and have recognised some of the forms of moveable kidney which he calls *new*, and of which he claims to have been the discoverer.

5. Besides the varieties of moveable kidney above enumerated, I have been in the habit of describing another and by no means the least important. These are the cases in which the kidney moves in a "cinder-sifting" manner behind the peritoneum, where the organ slides, so to speak, upon the plane of the posterior parietes, never "dropping" forwards or inwards, and so not properly described by the term "nephroptosis." Moreover, the kidney sometimes rotatates more or less round transverse axes, or round a vertical axis. When round the transverse axis or axes one of the poles of the organ (more usually the lower pole) glides inwards, or swings forwards and inwards, and this displacement may be combined with movements in the vertical or lateral direction. In vertical rotation the convex or outer border advances.

HOW THE DISCREPANCY OF OPINION AS TO FREQUENCY OF MOVEABLE KIDNEY CAN BE EXPLAINED.

Though no one would, I imagine, in the present day repeat the statement formerly made that there is no such thing as a moveable kidney, and that all the instances described had been cases of mistaken diagnosis, still there exist the greatest differences of opinion as to the frequency with which the kidney can be found to move pathologically. All sorts of variations between 1 and 22 per cent. and between 3 and 46 per cent. have been given as the frequency of moveable kidney in the female sex. Glénard, from his experience as physician to the Thermal Hospital at Vichy, met with 537 cases in 4215 patients under his observation, or a proportion of 14 per cent. of all the patients, males and females, examined, and 22 per cent. of all the females. Senator and Guttmann,[1] on the other hand, allow of only from 1 to 3 per cent., and the conclusions drawn from the reports of post-mortem examinations yield in some of the statistical tables less than 1 in 1000. These great discrepancies are capable of being easily explained.

1. Many cases have been overlooked in the dead body, the inspections having been made without any special examination as to the existence or otherwise of undue mobility, only the very striking and extreme cases which could hardly fail to attract notice on abdominal inspection being notified.

2. In the living body many cases are daily overlooked, because the old teaching that the kidney does not come under the influence of respiratory movements has prevented the employment of those methods of examination by palpation which reveal renal mobility, and also because the method of bimanual palpation commonly employed, and which is confined to manipulations below the ribs, generally checks or prevents the respiratory movements of the kidney by keeping or crowding the kidney back into the renal fossa.

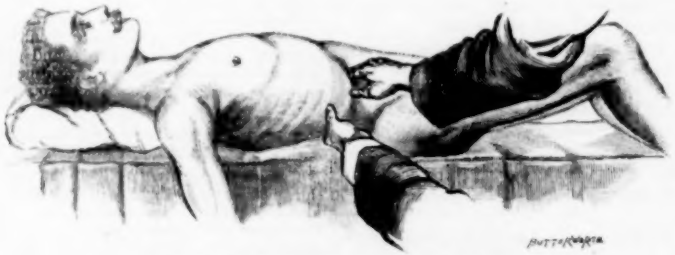
3. Those who deny that the kidney can be detected by palpation during normal or even deep respiratory movements, unless the organ is itself abnormally mobile, include in the category of moveable kidney every case in which during deep inspiration the lower extremity only of the kidney comes within reach of the examiner's fingers.

4. Physicians at health resorts and thermal hospitals, the greater number of whose patients are dyspeptic, neurotic, or hysterical, if they systematically employ methods of palpation with the object of detecting the existence or otherwise of abdominal ptoses, undoubtedly find a greater percentage of moveable kidneys in the persons whom they examine, than other practitioners who have fewer patients suffering from such-like maladies and who do not systematically examine for visceroptoses; and this percentage will be made still greater if, like Glénard, these physicians include every case in which they can feel the lower pole of the kidney on deep inspiration as one of moveable kidney or nephroptosis.

[1] Berliner Klinische Wochenschrift, 1890, No. 15, Discussion.

HOW TO ASCERTAIN WHETHER THE KIDNEY IS MOVEABLE OR NOT.

Several methods, each effective, have been recommended, and a brief description of two or three of them is desirable here because none of them seem to be as generally known or employed in clinical practice as they ought to be. The method which I have myself used since I first directed my attention to the surgery of the kidney, is the following. The patient should be on his or her back with the shoulders slightly raised by a firm pillow, the spine should rest quite flat upon the sofa or mattress with the lower limbs very slightly flexed. The patient should be lying close to the right edge of the bed or couch for the examination of the right kidney, and close to the left edge of the bed for the examination of the left kidney. The surgeon then places the fingers of one hand behind and upon, and also just below, the last two ribs, and the fingers of the other hand flat upon the front of the abdomen, just below the costal margin near the outer border of the rectus muscle. (See figure.) He should



Showing position of patient and examiner's hands.

be on the same side of the patient as the kidney which he is about to examine, and should be sitting or kneeling at the bedside, so as to have his lowermost forearm as nearly as possible level with the patient's body. When examining the right kidney the left hand should be on the loin and the right in front; when examining the left kidney the right hand should be on the loin and the left on the front of the abdomen. With the hand on the loin the lumbar parietes should be gently but firmly pressed forwards, and sustained so; then the fingers of the hand in front should gently and steadily depress the anterior abdominal walls upwards, backwards, and outwards. The kidney, if enlarged or displaced at all, will now be felt between the two hands, and even if not enlarged the lower pole of the organ will, in some persons, be detected by the fingers during natural respiration. Should this not be the case the patient should be directed to take a long and deep inspiration, and suddenly, but without muscular effort, to allow the air to escape from his lungs; in other words, he should make a long-drawn "sigh." The hand behind still maintains forward pressure on the loin, and the hand in front quickly follows the receding abdominal wall as it becomes relaxed in the expiratory movement. Thus the kidney, which otherwise cannot normally be felt, can often be seized between the fingers of the two hands before it has time to gain its normal position. This method becomes even more efficacious if the patient takes a second and a third similar "sigh" whilst the surgeon maintains and increases the deep pressure made after the first and second. Palpation is sometimes assisted by raising the patient's shoulders so that he assumes the semi-recumbent attitude.

In testing the mobility of the kidney, it is sometimes advantageous to place the patient in the knee-elbow or in the upright position. As a rule, however, I find it best to get the patient to roll over on the opposite side and then to employ bimanual palpation as I have just described. A moveable kidney which persistently declines to become evident will frequently fall at once towards the front of the vertical column, below the costal margin, as soon as the lateral position is assumed and a deep inspiration is taken.

Glénard's method consists in compressing the lower part of the thorax by placing the fingers of one hand on the eleventh rib posteriorly and the thumb of the same hand on the level of and below the extremity of the ninth rib, then crowding back at the same time the abdominal walls with the other hand placed on the umbilical region. By compressing the intervening structure between the fingers of the two hands the kidney as it descends during a deep inspiration is detected by the thumb. Glénard describes the thumb and fingers as assisting in forming a narrow ring, which is completed on its internal side posteriorly by the vertebral column and anteriorly by the fingers of the other hand. He describes the kidney as feeling like a vague indefinite mass as it descends during a deep inspiration. This is the "*palpation néphroleptique*" of Glénard.

Israel's method consists in making the patient lie on the side opposite to that which is to be examined, whilst the surgeon stands on the left side of the couch to examine the right kidney and on the right side of the couch to examine the left kidney; in each case, therefore, his own face is towards the patient's. In examining the right kidney he places the fingers of the left hand upon the right lumbar region and the right hand upon the anterior abdominal wall in such a manner that the tips of the index finger and the middle finger are two fingers'-breadth below the junction of the ninth and tenth costal cartilages. Then, whilst the left hand is supporting the lumbar region, the patient takes a deep inspiration and the kidney is felt at the end of this act.

By my own method the kidney is felt best at the end of the inspiration and at the very beginning of expiration, as soon, that is, as the muscles of the abdominal wall relax. Glénard claims for his method that it is at the beginning and throughout the act of inspiration that he feels the kidney. But a result of making a deep inspiration is to push forwards and to harden the muscles of the anterior abdominal walls, and this has the effect of preventing deep indentation of the parietes with the hand which is in front. It is only in very thin persons, and in those with very flaccid abdominal muscles, or in very extreme cases of nephroptosis, that the kidney can be felt to descend during the whole act of inspiration. By Israel's method the detection of the kidney is made at the end of inspiration.

THE SYMPTOMS OF MOVEABLE KIDNEY.

These may be considered under the headings of, first, the physical signs discoverable by palpation; and secondly, the subjective symptoms complained of by the patient.

The physical signs.—There may be none ascertainable, owing either to the thickset conformation or the obesity of the patient; or, in a slight person, to the elongated shape of the thorax, to the high position of the kidney, or to the movements of the kidney being of the kind which I have described under Group 5 as of the "cinder-sifting" variety. In thickset persons, and those inclined to stoutness, there may be a wide range of movement, and yet the kidney may be quite beyond the reach of palpation. Yet in some of the cases in which there are no physical signs the subjective symptoms are very acute.

In some cases of great mobility in which the kidney can often be detected very easily, there are times when the organ cannot be felt at all. I think it important to observe the rule never to declare that a kidney is not moveable because on a *single examination*, even though most carefully and systematically made, I cannot feel it move; more especially not to do so if a trustworthy observer has on some previous occasion felt sure of its moving. I have sometimes reduced a floating kidney and nothing that I or the patient could do at the time of the consultation could make it come again into evidence, though the next day it was floating as freely as ever. I once examined a patient in my consulting-room who had

been sent from Switzerland to have an operation for moveable kidney, but I could find no evidence at all by palpation that the organ moved. Two days afterwards I saw the patient in her bed, when the right kidney was found to be so moveable that it could be pushed freely about in almost any direction. There is no doubt of the importance of making more than one examination where moveable kidney is suspected.

When the mobility is considerable the kidney may fall below the margin of the ribs towards the umbilicus or the pelvis when the sitting or erect posture is assumed, or it may roll towards the median line when the body is inclined to the opposite side, and be easily pushed back into the loin when the recumbent position is resumed. In rare cases the patient can at will bring her moveable kidney right out of the hypochondrium into the umbilical, lumbar, or iliac region, by some particular movement or posture which she has discovered by accident. Thus a middle-aged woman with flaccid abdominal walls was able with her right hand to push out the right kidney without any pain, so that it could easily be grasped through the flaccid abdominal walls by the fingers of one hand.

Except in the "cinder-sifting" form, one can make out by palpation, not only if the kidney moves too freely, but also if it rotates. The direction of the long axis of the organ is frequently oblique from above downwards and inwards, the hilum being turned upwards and inwards. More rarely the hilum is turned downwards. When the patient is rolled over on to the sound side the convex border of the kidney may be felt to tilt forwards and to incline inwards towards the front of the spine.

When the kidney is ectopic, occupying the lumbar or iliac region—whether it be only of normal size or enlarged from some disease—it is generally beyond the influence of the diaphragm and does not move with respiratory movements, though it may be freely pushed from place to place.

Percussion over the kidney usually gives a tympanitic or muffled tympanitic note. Epigastric aortic pulsation and congested enlargement of the moveable kidney are very commonly present. During the catamenial period I have known a moveable kidney to assume large proportions and to have been mistaken for a new growth of the kidney.

The subjective symptoms.—The kidney may be distinctly moveable without any symptoms whatever being produced and without the patient being at all aware of its undue mobility. The usual symptoms are (1) pain; (2) troubles of digestion; and (3) neurasthenia and hysteria. These three kinds of symptoms may occur either separately or in association. (4) Occasionally, but comparatively rarely, there is some change in the urine or in the functions of the urinary organs. (5) More rarely still, some extreme complication due to compression or dragging, such as intestinal obstruction, jaundice, or great gastric dilatation occurs.

The pain is sometimes described as being merely a constant ache in the back and down the affected side of the abdomen, or as a dragging sensation or weight in the loins and on the affected side of the abdomen, or pain below the shoulders and at the back; or stiffness of the back and cramping pains in the abdomen may be complained of; and some patients experience an occasional uncomfortable sense of something moving in the side, which when very marked has been compared to the movements of a fœtus in utero. The pain may disappear on lying down, and become aggravated, if not actually induced, by walking and standing; in other cases it gradually increases, and remains severe even for hours after the recumbent posture is resumed. Neuralgic pains in the course of the great nerve trunks on the affected side may occur. Renal paroxysms of grave severity are in some cases excited. These attacks are quite sudden, and are characterised by intense abdominal pain, hardening of the abdominal wall uniformly or only on the affected side, faintness, giddiness, and symptoms of collapse. During these attacks the kidney can often be felt enlarged from congestion or renal retention of urine, and it is extremely tender. The urine becomes scanty and may contain albumin, casts, or even blood; but again becomes normal when the attack passes off, and then polyuria sometimes follows. These symptoms are probably due to displacement and rotation of the kidney, with torsion of its pedicle, and to the organ becoming intensely swollen and congested. Acute hydronephrosis may be produced and a tumour thus formed, or a very tense hydronephrosis may occur in a kidney too small to form an appreciable tumour. Acute, paroxysmal, and severely painful cases have long been known and have received the name of "renal incarceration" from their analogy to cases of strangulated hernia. I made mention of them in my work in 1885 and I published instances of the kind many years ago and again in my Cavendish Lecture in 1893. Mr. W. Bruce Clarke, who recorded some cases in 1893, proposed for them the name "acute renal dislocation." This term had also been used by the ancient writers, who looked upon the condition as being more allied to the displacement of the head of a bone than to a strangulated hernia.

Disturbances of the digestive system are in some patients especially prominent. Vomiting, often frequent and severe, sometimes preceded by a burning sensation in the epigastrium, together with symptoms of gastritis or actual dilatation of the stomach, occurs. In the large intestine the most common condition is one of obstinate constipation, which may in some cases amount to temporary obstruction; occasionally there is irregularity of the bowels or diarrhœa. These symptoms are probably produced either by actual pressure or by the dragging of the misplaced kidney upon the intestine. Folds of peritoneum have been observed passing from the kidney to the duodenum in such a way that when they are pulled upon the lumen of the duodenum is narrowed or even occluded, as in a case recorded by Franks. Macalister, who has also observed similar folds, believes that they are by no means uncommon and that they furnish a natural and adequate explanation of the gastric disturbances which occur in these cases. The gastric symptoms are liable to acute exacerbations or "crises," as first described by Dietl in 1864. They consist of violent attacks of colic attended by nausea and vomiting, and these may be accompanied by abdominal distension and tenderness, and sometimes by a rise of temperature and signs of collapse. Transient attacks of jaundice are said not to be infrequent, but I have never personally witnessed them; they are probably dependent in some way upon the dragging of folds of peritoneum on the duodenum as above described; for the idea that there is ever direct pressure of the kidney upon the bile-passages is not borne out by anatomical investigation, except possibly in such a case as Lindner's, in which a floating kidney with stones in the pelvis pushed against the gall-bladder and gave the appearance of a tumour of the gall-bladder, but in that case there was no jaundice. A right floating kidney, if carefully drawn forwards or downwards, causes traction on the duodenum at a point from two to three centimetres below the entrance of the biliary duct; and though it does not occlude the lumen, it may interfere with the contents of the bowel sufficiently to impair digestion and to cause biliary obstruction. Symptoms of chronic appendicitis are considered by Edebohls to be a very frequent complication of moveable kidney on the right side, and he explains this on the supposition that the misplaced organ produces an indirect pressure upon the superior mesenteric vessels, which become compressed between the pancreas and the bodies of the vertebræ, and thus a chronic congestion of the appendix and colon is produced which is sufficient in the case of the appendix to give rise to definite symptoms.

As to neurasthenia and hysteria there is no doubt that moveable kidney, like many other causes of physical suffering, slight as well as severe, may lead to the development of hysteria in a female who had previously shown no signs of any such neuropathic tendency, and this may be completely cured by nephropexy. There are other individuals who have shown signs of hysteria before the kidney has been known to be moveable and whose condition is aggravated by the knowledge. But hysteria and neurosis are not by any means invariable accompaniments of moveable kidney. Some of the most painful cases develop after a slight injury, and still many more, that occur without any assignable cause, are met with in healthy women, physically and mentally active, who are completely invalided against their will by the pain and digestive troubles caused by the moveable kidney. Though the patients have perseveringly, but in vain, tried belts, diet, and recumbency for a long period they obtain the most complete and gratifying results from fixation by operation. It undoubtedly happens sometimes that a person is credited with being neurotic and her symptoms are attributed to hysteria because, owing to an insufficient investigation of the case, a moveable kidney has been overlooked; but the opposite error of overlooking the hysterical element and attributing all importance to the nephroptosis is also made.

To do this is to court failure, for we are regarding as a cause what may be only a coincidence.

As regards changes in the urine and the urinary functions: in most uncomplicated cases the urine is healthy, and is as a rule voided in the normal way; in many cases there is some albuminuria from time to time, but if the urine is habitually albuminous the albumin will be due to some pre-existing or co-existing disease. Still there are cases, not so very few, in which urinary symptoms are complained of. Kuttner speaks of frequent straining in order to urinate, and of slight polyuria. Apolant draws special attention, in the case of a woman, aged 50 years, with very serious abdominal disturbance due to a floating kidney, to a symptom which had been but little regarded, if not entirely overlooked—namely, excessive polyuria. I have operated upon several cases of moveable kidney in which slight pyuria or hæmaturia and frequent ardent desire to micturate were symptoms.

The leading question about which the most opposite opinions are entertained is as to the influence exercised by a mobile, an ectopic, or prolapsed kidney in producing any of the gastro-intestinal and nervous symptoms ascribed to it. It is said by Glénard and those who adopt his views that nephroptosis is merely an accidental or casual incident in the progress of enteroptosis; that in this progress it is the ptosis of the intestines which is the essential element; that ptosis of the kidney, if the organ is otherwise normal, occurs only in nervous dyspeptics and persons affected with neuropathies or the affections grouped under the terms "biliary lithiasis" or "gastric crises," and that the fundamental symptoms in these patients are digestive; that the local subjective symptoms (the sensation of a ball in the side, the movements, the dragging from the loin, &c.) and the painful gastric and abdominal crises, are met with equally in persons whose kidneys are not mobile or displaced; and that these symptoms are of cæcal, colic, duodenal, gastric, or hepatic origin. Lastly, they aver that if a moveable kidney of itself provokes any symptoms whatever it is because the kidney is diseased and that then the symptoms differ from those commonly but erroneously attributed to the mobility of the organ. Against these views it is held that nephroptosis is not unconditionally associated with splanchnoptosis; that the great majority of cases of nephroptosis are independent of enteroptosis; that the patients who come under the observation of the surgeon on account of floating or moveable kidney are, as a rule, free from undue mobility or ptosis of any other abdominal viscus; that the most severe renal and abdominal crises are cured by nephropexy; that women with lax abdominal walls, an evident degree of splanchnoptosis, and a freely moveable kidney may be quite cured of all renal and intestinal symptoms by the operation; and that the classical gastro-intestinal and nervous symptoms are sometimes caused by a kidney moving in a "cinder-sifting" manner, the mobility of which cannot be detected by palpation. Experience has taught that there are cases of nephroptosis, others of enteroptosis or splanchnoptosis, and others again in which nephroptosis and splanchnoptosis co-exist; that in many cases very severe symptoms are caused by the mobility and prolapse of the kidney; and that the treatment suitable for enteroptosis is not sufficient in many cases to relieve or even to influence the symptoms due to moveable kidney. I am as sure of this as of any fact in surgery—namely, that the most complete and lasting relief from renal and abdominal crises has followed nephropexy; and that patients after the operation have improved in general health and spirits, have confessed themselves better than they had been for many years, have put on flesh, and have been pronounced by their relatives and friends as quite altered beings, who, however, had previously and in vain tried all kinds of treatment both at home and at health resorts.

THE DIAGNOSIS OF MOVEABLE KIDNEY.

In no case are we justified in positively concluding that a patient's sufferings are due to moveable kidney unless we can actually feel the kidney to be unduly moveable. In cases in which one-sided pain, some amount of gastro-intestinal disorder, and occasional crises with possibly a little pus or blood in the urine, occur, though without any tangible signs of undue mobility of the kidney, we may suspect a moveable kidney, but the diagnosis cannot be made absolute until the organ is explored. We must bear in mind that the "cinder-sifting" renal movements cause similar symptoms to those of nephroptosis generally, also that they cause symptoms closely resembling those of stone in the kidney or ureter as regards pain and renal crises, but that they will entirely escape detection if we lean too implicitly upon the results of the Roentgen rays, and if when we fail to find evidence of a stone we decide not to explore the kidney. The same is true also of abnormalities of the renal pelvis and ureter, of early tuberculosis, and of small abscesses of the kidney, each of which, though remediable by operation, cannot be detected by the x rays. On the other hand, even when all the typical symptoms are complained of, we must not decide that the moveable kidney is the cause of them until we have made a careful investigation of the other organs of the abdomen and pelvis, both as to their anatomical character and relations and as to the way in which their functions are discharged. By means of careful and systematic palpation the diagnosis between a "moveable" or "floating" kidney on the one hand, and other moveable abdominal tumours on the other hand is usually sufficiently easy, although there are several instances of mistakes having been made by most capable clinicians. A "floating" kidney has been sometimes diagnosed as something else, but what happens far more frequently is that some other tumour, not renal, is diagnosed as a moveable kidney. Probably the commonest error is to mistake an enlarged gall-bladder for a "floating" kidney. These two conditions often co-exist. A moveable right lobe of the liver has been taken for a floating kidney, as have also a moveable spleen, cancer of the cæcum, cancer of the stomach, a tongue-shaped lobe of the liver, an intra-peritoneal abscess, an ovarian cyst or dermoid of the ovary, a uterine myoma, and tumours of the omentum or mesentery.

PATHOLOGICAL EFFECTS OF MOVEABLE KIDNEY.

The most common effect of moveable kidney is the general impairment of the health of the patient. Languor, debility, loss of flesh, vertigo, constipation, hypochondriasis, great restlessness, great anxiety, perversions of sensations or of the special senses, hysteria, and many other neurotic conditions are the ordinary consequences.

The most frequent effect upon the kidney is hydronephrosis, either intermittent or persistent. When distended a hydronephrotic organ may give rise to an abdominal tumour, but in other cases the kidney, though converted more or less into a mere sac, is of small size and cannot be detected by palpation even when tightly distended.

TREATMENT.

In many cases of moveable kidney the symptoms, if any exist, are so slight that no treatment is requisite When symptoms occur in spite of the avoidance of active exercises, when pain, aching, and a wearying sense of dragging weight or of great lassitude are caused by ordinary standing and walking, or when pain occurs even during absolute quietude and total avoidance of every form of physical exertion, nephropexy is called for.

Various forms of trusses and bandages have been devised and have in some cases given some partial relief. But though some patients are rendered more or less comfortable they are not really cured by these appliances. Moreover, the pads and bandages are not free from the risk of doing more harm than good in cases belonging to Groups 1, 2, and 4 unless care is taken not to apply them before the kidney is replaced in its natural position, or if the kidney descends after the pad has been duly adjusted. Very much depends upon the care with which the belt or bandage is applied. I have known much comfort and an entire freedom from crises to be derived from their use during the time that the patient was under supervision and was not allowed to rise until the kidney had been replaced and the belt adjusted, but as soon as the patient was left to put on the bandage for herself all her troubles returned. One such patient suffered some of the most severe renal crises that I have ever witnessed and had often to be kept under chloroform for three or four hours at a time. She was quite cured by nephropexy 12 years ago, and has led a very active life ever since. In fact, in cases of simple or uncomplicated nephroptosis belts and pads are practically useless, and some of the frightful things which have been produced under the name of "kidney pads" ought to be relegated to a chamber for the collection of instruments of torture. It is chiefly in the rare cases in which moveable kidney is associated with enteroptosis that belts are of any real use, and in these cases the best form of belt is one shaped so as to fit well above the hypogastrium and without any pad, to support

the abdomen generally. Not a few women find a belt so irksome and uncomfortable that they positively refuse to continue wearing it, especially when they realise that they can never be cured by the treatment, that though the belt may keep the kidney in place by giving a general support to the abdomen, it cannot end in fixing the kidney in its proper place, and that to give continuing comfort it must be worn for life.

My experience leads me to attach next to no value to rest in the recumbent position. In several instances in which I have operated with most gratifying results the patients have kept the recumbent position for six or nine months before the operation, without the least improvement from it, all their symptoms returning immediately after getting about again.

An operation should certainly be advised when the symptoms are severe and are not relieved by rest, mechanical appliances, and appropriate medicinal and dietetic treatment; when mechanical appliances cannot be borne or seem to increase rather than to mitigate the symptoms; and when the patient cannot take gentle exercise or even sit erect for long without suffering. In cases in which in spite of palliative treatment paroxysms of nephritic colic, fainting, sickness, vomiting, and pain radiating far and wide in the course of the branches of the lumbar plexus of nerves occur frequently, the only possibility of relief is surgical operation.

The only operation justifiable is nephropexy. Nephrectomy is no longer admissible for moveable kidney. Nephropexy has proved to be both safe and successful and it has entirely superseded nephrectomy. Collected statistics show the average mortality of nephropexy to be but slightly over 1 per cent., and my own tables, giving all the operations of this nature which I had performed up to March, 1898, show 57 cases without a single death. Up to the present time in considerably over 100 operations I have had only one death and that was from cardiac thrombosis in a stout female whose kidney was incised and explored before being fixed. Nephropexy has not the same value as a means of relieving each of the three leading classes of subjective symptoms—viz.: (1) pain; (2) gastro-intestinal disturbances; and (3) nervous phenomena. It has cured 90 per cent. of the cases in which pain was the chief symptom. If pain continued after the operation it was because either the diagnosis was at fault or the kidney was otherwise deranged. In the gastro-intestinal group of symptoms, the operation has been less successful than when performed mainly on account of pain. Flatulent dyspepsia and constipation are the two symptoms of this group which I have most frequently seen to persist; but there have been very few patients amongst those I have operated upon, and whose subsequent histories I have been enabled to follow, who have not been improved even in these respects. On the nervous phenomena the effect of the operation is far less satisfactory. Operations upon hysterical patients for the relief of subjective symptoms, even when they are based upon a real ascertained physical basis, are not only apt to fail in giving relief but may arouse ideas which end in fresh complaints or in an aggravation of the original ones. If, however, the hysteria or neurasthenia has been secondary to the moveable kidney we should not hesitate because of the uncertainty of the therapeutic effect to operate, even though the nervous symptoms are very pronounced. If palliative means have been found insufficient we should perform nephropexy, though we should warn the friends, if not the patient herself, of the speculative nature of the result.

There are several ways of performing nephropexy and many surgeons prefer some one to all the others. Practice has taught me that it is best not to confine oneself to one form of operation. There are at least three which have special advantages in different kinds of cases. I choose one method in one case and another method in another. The methods which I employ are, first, Vulliet's operation; secondly, that which I call my own; and thirdly, a modification of the method recommended by Tuffier.

The conclusions as to the treatment of moveable and floating kidney by nephropexy at which I have arrived are the following. I would, however, preface them by repeating what I have said above respecting belts and bandages—namely, that they have no efficacy in nephroptosis uncomplicated with enteroptosis and that when employed in cases of moveable kidney they increase pain and may otherwise do harm if not carefully and properly applied.

1. When moveable kidney is associated with enteroptosis, no operation should be performed on the kidney unless it is evident that the more serious symptoms are due to the mobile kidney alone, and not until after the trial of a well-fitting abdominal support and the careful dietetic and medicinal treatment of the gastric and intestinal disorders. Should these means fail and the kidney evidently be most at fault, nephropexy, followed by the wearing of an abdominal belt, should be tried.

2. When a moveable kidney is complicated by a moveable liver, or when both kidneys move, the same rule should be followed as in general enteroptosis; in the case of both kidneys moving (when both organs have been giving trouble) they should be fixed one after the other at an interval of a week, so that convalescence from both operations may be taking place simultaneously. I have in several instances thus operated upon both organs with the most satisfactory results.

3. When the moveable kidney occurs in a hysterical or neurasthenic patient, all palliative means should be tried before resorting to an operation, and the patient's friends should be informed of the uncertainty of the result from operation. The statistics show that a cure may be hoped for by nephropexy in about half of these cases.

4. For uncomplicated moveable or floating kidney, in which the principal symptoms are pain and gastro-intestinal troubles, the operation may be confidently advised and carried out without any previous trial of belts or of rest.

5. When renal crises are a feature of the case nephropexy ought to be strongly urged because of the impossibility of keeping the kidney in its proper place by a belt, and because of the constant risk of hydronephrosis and recurring pain, even if the renal crises can be kept under control.

6. When a moveable kidney gives rise to no inconvenience an operation ought not to be thought of and a belt need not be worn.

A Clinical Lecture

ON

THE SYMPTOMS AND TREATMENT OF PERIGASTRIC ADHESIONS.

Delivered at Guy's Hospital on June 12th, 1901,

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GENTLEMEN,—The great improvements in abdominal surgery which have been effected during the last 20 or 30 years have rendered it necessary that we should strive more than ever to be precise in diagnosis. 20 or 30 years ago it sometimes hardly mattered what form of abdominal disease you were dealing with, for you could in many cases do little else than give opium, restrict the food, and keep the patient quiet. Now so many abdominal diseases which do not yield to other treatment can be successfully dealt with surgically that it has become imperative for you to try to decide what may be the precise cause of the patient's trouble in order that you may determine whether surgical interference is justifiable. You must set your minds firmly against the "Let's look and see" view which I notice some of you are inclined to adopt in talking of opening the abdomen. From the patient's standpoint this view is obviously highly undesirable, for he naturally will resent having his abdomen opened unnecessarily; from your standpoint it is quite as undesirable, for every case, especially if obscure, is a severe mental training for you, and you are so much the poorer physicians if, instead of trying hard to make out what is the matter, you give up the problem before you have attempted to solve it. Remember, it is only justifiable to do an exploratory laparotomy if, all other methods having failed, you are unable to arrive at a diagnosis. These preliminary remarks are, I think, necessary, for the subject of to-day's lecture is so little understood that few books even mention it.

Perigastric adhesions may be due to many causes; for instance, they may be met with in tuberculous peritonitis or in malignant disease of any organ in the upper part of the abdomen, or as a sequel to gall-stones. We have had an instance of this last quite recently in Miriam Ward, the

patient being a woman over 60 years of age, who was sent to me by Dr. E. A. Starling. In these cases local peritonitis around the gall-bladder leads to the formation of adhesions between it and the first part of the duodenum, or even the pylorus. These by compression and traction cause abdominal pain and gastric dilatation, and often a thickening can be felt through the abdominal wall. You should always suspect that these adhesions are present when an elderly woman who gives a history of gall-stones shows these symptoms, and, as a rule, the diagnosis has to be made between such adhesions and carcinoma of the pylorus.

To-day I propose to confine myself to perigastric adhesions due to gastric ulcer, as it is only for these and those in connexion with the gall-bladder that you can hope to do much save in very rare instances, and I can fortunately bring before you several cases of adhesions due to gastric ulcer. They are by no means uncommon, for of the gastric ulcers found in the post-mortem room about 45 per cent. have formed adhesions to some neighbouring organs. The following table, taken from Fenwick, shows the organ to which the stomach was adherent in 123 cases in which a gastric ulcer formed adhesions to neighbouring organs.

Organ.	Number of cases.	Per cent.
Pancreas (alone)	49	40·0
Liver (alone)	33	26·8
Pancreas and liver	10	8·1
Colon	7	5·7
Liver and colon	4	3·2
Spleen	2	1·6
Mesentery	3	2·4
Three or more organs	15	12·2
—	123	100·0

On analysing 142 cases of pancreatic disease I found four in which this organ was adherent to the stomach as a result of the old gastric ulcer. Probably this under-represents the number, for slight adhesions might not sufficiently arrest the attention of the morbid anatomist for him to make a note of their presence. It is not surprising that such a large number of cases of gastric ulcer form perigastric adhesions, for there is often a little local peritonitis over a gastric ulcer. Nor is the adhesion to a neighbouring organ altogether harmful, for it often saves the patient from the danger of perforation. During nine months I have come across eight cases in which the symptoms appeared to warrant a diagnosis of perigastric adhesions in connexion with a gastric ulcer. In three operation was refused and the patients have drifted out of observation. In the remaining five, two of whom you have recently seen in the ward, the abdomen was opened and the diagnosis was confirmed; and I will now give you briefly a summary of what I would suggest these cases show us to be the symptoms that should lead to a diagnosis of perigastric adhesions due to gastric ulcer.

With all our patients very severe pain was the prominent symptom. Sometimes it was excruciating, and many of you had an opportunity of seeing the patient in Case 3 roll about in bed doubled up in the agony of her pain. In two of our cases the patients were fast becoming habituated to the use of morphia. The pain is, I think, usually situated at the upper part of the abdomen and probably it is an important factor in diagnosis that it often lasts for years. The patient in Case 2 said that for several years she had had paroxysmal pain. In Case 3 the patient had had pain for five years. In Case 4 the pain had lasted for 13 years, the patient being sometimes free for a few weeks but never longer, and in the other two cases although the statements are not so definite the pain had lasted a long while. Most patients suffering from dyspepsia or from uncomplicated gastric ulcer, it is true, often relapse, but in the interval between their separate attacks they are free from pain. But if adhesions are going to cause pain it is only natural that the pain should be more or less constant, and I take it that the constancy and very long duration not only of pain but also of any other symptoms which may be caused by perigastric adhesions are of the greatest value in the diagnosis of them. The other condition most likely to cause such constant symptoms is carcinoma. The diagnosis between perigastric adhesions due to ulcer and those due to gastric carcinoma may be difficult, but there will usually be some guide; it must be remembered that the perigastric adhesions often lead to no loss of flesh and that at any rate the wasting is less than with carcinoma, that they rarely lead to death, that they occur in younger people, and that in carcinoma hydrochloric acid is usually absent. It is noteworthy that our patients were usually sure that the taking of a meal did not increase the pain, nor is this surprising, for the pain is no doubt due to the dragging of the adhesion on the stomach, and therefore it may well be less when the stomach is dilated, for then the gastric attachment of the adhesion will be brought nearer to its other end. But the pain is often paroxysmal, even though it is constant; this, no doubt, is due to peristalsis dragging on the adhesions, and it is interesting to note that in Case 3, in which the adhesion passed from the stomach to the intestine, the paroxysms were particularly frequent and particularly severe, probably because peristaltic contractions could drag on either end. Before leaving the subject of pain I should like to remind you that it is very likely that some of the cases of abdominal pain commonly ascribed to "gastralgia," "gastrodynia," "hysteria," or "hypochondriasis" are really due to intra-abdominal adhesions.

In some of our cases there was local tenderness over, or nearly over, the site of the adhesions and also it was sometimes possible to obtain by palpation a distinct feeling as if there were some matting of organs. No doubt the adhesions are frequently associated with a dilated stomach owing to contraction of an ulcer near the pylorus or owing to kinking of the stomach by the adhesions, but I think if the ulcer is healed and there is no constriction, so that the patient is suffering solely from adhesions, it is probable that there will be no vomiting, that the tongue will be clean, and there will be but few symptoms of indigestion, indeed, that there will be little else to notice save the severe pain. On the other hand, there may be, as in our first case, the symptoms of dilatation of the stomach, for, as already remarked, the adhesions themselves may cause the dilatation. Also there may be symptoms of gastric ulcer such as vomiting and hæmatemesis associated with the pain due to the adhesions and possibly the dragging of the adhesions may keep the ulcer open. When severe gastric dilatation is due to an ulcer surgical interference is clearly necessary whether the dilatation be due to adhesions or cicatrisation of the ulcer and hence when dilatation is clearly present the diagnosis of perigastric adhesions is not of very great importance, but it is very important to distinguish between a case of ulcer without adhesions and a case of adhesions in connexion with a healed or quiescent ulcer, for in the former case an operation is probably unnecessary and may do harm, while in the latter if any relief is to be obtained it can only be reached by an operation. It is likely that future experience will show that the distinction is this—that in cases in which all the symptoms are due solely to the adhesions the pain is very long-lasting and constant, that it occurs when the stomach is empty more than when it is full, and that it is not increased or started by food. Further, vomiting and hæmatemesis are absent and the digestion remains good; therefore the patient is not wasted and has a clean tongue. Probably different adhesions trouble the patient to a different degree. If a band passes from the stomach to the colon a contraction of either will cause extreme pain, but if a large area of stomach is attached to some fixed organ, as the pancreas, it is hardly likely that pain will be so severe; but, on the other hand, it is quite possible that when, as is often the case, a large area of stomach is ulcerated away and the floor of the ulcer is formed by the pancreas the symptoms of dyspepsia may be marked. I need hardly add that if the previous history points to there having been a gastric ulcer this will greatly aid the diagnosis of gastric adhesions. We had this help in most of our cases.

Let us now pass on to the treatment. It is clear that drugs cannot separate adhesions and that therefore the only hope of relief is for the surgeon to divide them. In the five cases which form the subject of this lecture it was sometimes easy to tear them with the finger, and once there was such a large vessel in an adhesion that it required ligature before the adhesion could be divided. As we are only on the threshold of our knowledge we do not yet know how likely it is that these adhesions will re-form, but as this is possible it would probably be better, when feasible, to remove them rather than simply to divide them. You will, of course,

remember that you should not separate adhesions to the pancreas or liver when either of these organs forms the floor of the ulcer, but we have just seen that probably these are just the cases in which the adhesions are least likely to cause pain. Always bear in mind that there may be two ulcers and therefore two sets of adhesions in the same case. If the patient is suffering from vomiting and other symptoms due to dilatation or to an ulcer as well as from symptoms of adhesions, do not spend time trying the effect of rectal feeding if you have made up your mind that an operation will ultimately be necessary, for patients nearly always lose ground during rectal feeding and are therefore less likely to be good subjects for what may be a long and tedious operation.

Turning to the results of treatment, the patient in Case 2 it will be seen died from sudden cardiac failure and therefore it was quite impossible to say whether the fact that the adhesions were divided would have relieved her pain. Case 5 was a case in which two extensive ulcers with numerous adhesions were present. That the patient must have died in any case was evident to all who watched her. Our regret was that we did not have the opportunity of operating many months before she came into the hospital. With regard to the other cases the results are very interesting. In Case 1 the cure has been complete, the change from a skeleton of a man unfit for anything to one able to enjoy life and to earn his living is most striking, and it will be observed that the improvement in him is maintained. It is more important to study the women. The patient in Case 3 was during her stay in the hospital after the operation apparently cured. She went to her village home and the pain returned. As the adhesions were completely divided I suspected that this return of symptoms was due to her having again got back to the sympathetic audience of a country village, so I had her brought to London and watched her for three weeks. When in the hospital before the operation she writhed in pain; now, as we cheered her up and advised her not to think of it, she had none worth mentioning. During the whole of the three weeks she slept well without morphine, which was formerly necessary, she ate ordinary food, and she busied herself about the ward. No one seeing her could have the slightest doubt as to the benefit of the operation. In Case 4 the patient, after the operation, while in the hospital gained 11 pounds in weight and was better in every way. When she returned to her native village her pain and sickness came back, so we had her brought to Guy's and watched her. She was obviously improved in health—in fact, she appeared a very healthy woman—although she was sometimes sick, but I strongly suspect that this sickness was no longer the result of disease of her stomach. Now, in the first place, it must be remembered that after dividing adhesions or enlarging a constricted pylorus only the results of the ulcer are dealt with, any ulceration present remains and may cause symptoms; but apart altogether from this there is very little doubt that the nervous system of women who have for many years been suffering from severe abdominal pain—especially if, as in both of these women, much morphine has been given—becomes undermined and so, like the woman with a floating kidney, while much of the suffering is due to the actual intra-abdominal dragging, there is superadded suffering which for want of a better word we call "functional," and this is not permanently relieved by the fixation of the kidney; and in this connexion it is interesting to recall the fact I have already mentioned that these cases of adhesions are often called "hypochondriasis" or "hysteria." It is very important that you should remember this, for then you will try to diagnose these cases early and free the adhesions before they lead to nervous deterioration. On the other hand, if they have existed long you will warn the patient's friends that even after they are freed some symptoms may remain which can only be dealt with by helping the patient to help herself. I know that it has been suggested that this return of symptoms may be due to the re-formation of the adhesions, but Case 3 shows that this certainly is not always so. The symptoms returned suddenly and severely when the patient got among her own friends, ceasing again directly she got back to the hospital; and also in another case in which I have been told of their return when the patient got home their reappearance was so soon after the operation as to make it very doubtful if it was due to fresh adhesions. We will now pass on to consider our individual cases and see how they illustrate our subject.

CASE 1.—The patient was a man, aged 30 years. In 1894 and the early part of 1897 he was treated for dyspepsia by bismuth mixture and restricted diet. In December, 1897, he was taken ill with sickness, slight hæmatemesis, and severe abdominal pain; for this he kept his bed some time and was altogether under medical treatment for four months. During the next 12 months he was better; in the spring of 1899 he lost ground, but not seriously. During the winter of 1899–1900 he suffered continuously from abdominal pain; early in February, 1900, this was very severe and was accompanied by sickness and hæmatemesis. The pain got a little better but the sickness continued; he became very anæmic and lost 20 pounds in weight in six weeks. I saw him with Dr. Youatt on May 15th, 1900. He was then extremely wasted, looked very ill, was so weak that he was quite unable to follow his occupation, and was in much pain. He had all the signs of a dilated stomach, which we found would contain three quarts. It appeared to Dr. Youatt and myself that this was clearly a case of dilatation of the stomach secondary to an ulcer at the pylorus, and as we could not see any way of relieving the patient except by surgical interference Mr. W. Arbuthnot Lane was asked to see him. He agreed with the diagnosis and therefore opened the abdomen. We found that just to the gastric side of the pylorus the stomach was attached by adhesions to the structures behind it and to the liver. It was evident from the aspect of the parts that these adhesions were connected with gastric ulcer. They kinked the stomach so that they obstructed the flow through the pylorus. The adhesions were divided without difficulty, and at once the kinking disappeared. The abdominal wound was then sewn up, the stomach not having been opened. The patient made an uninterrupted recovery. Exactly a year after the operation his brother, a medical man, kindly visited him for me and then came to report progress. He said that after the operation the patient had gained ground considerably and had returned to his work for which he found himself quite equal; he was married early in September, 1900. On Dec. 7th, 1900, his brother saw him and he was in good condition and vigorous, saying that he had enjoyed life during the previous six months more than he had done for six years. On May 15th, 1901, his brother again saw him and found that he had not left off his work any day since his marriage. He seemed perfectly well and had put on much flesh, he had a good appetite, took ordinary food, and ate heartily. He did not suffer any pain. He was, in fact, quite a different being from the wasted sufferer who was too weak to work. The only possible drawback to the above account was that in the winter he did have a little pain and slight sickness, but this was easily controlled by a bismuth mixture, and at the time was attributed to indiscretion in diet.

This case illustrates that adhesions may cause dilatation of the stomach. Probably at the time of operation the ulcer was still open, for hæmorrhage had occurred shortly before. As this ceased after operation it suggests that the adhesions kept the ulcer open. It is perhaps difficult to dissociate the symptoms of ulcer from those due to adhesions, but the case illustrates admirably the benefit of surgical interference.

CASE 2.—The patient, a woman, aged 45 years, was seen with Mr. J. Curling Bates of Norwood. She had never had any illness except that for which she now sought advice. She said that for several years she had had paroxysmal pain in the back and abdomen which had been much worse during the past three months. The pain had kept her awake at night and had had no relation to food except that eating was sometimes a relief. There had been occasional bilious vomiting during the attacks. The patient had often been constipated, but had never brought up or passed any blood. No remedy had benefited her. I first saw her early in June, 1900, and on talking over the case with Mr. Bates decided that perhaps the pain was due to adhesions in connexion with an old gastric ulcer. We pointed out to her that as everything we knew of in the way of drugs had been tried for years to relieve her and that the pain was steadily getting worse, we thought that her best course would be to submit to an exploratory operation to discover whether our diagnosis was correct, for if it was we thought that much might be done to relieve her. Our view of the case was confirmed, we thought, by the fact that there was great tenderness half-way between the umbilicus and ensiform cartilage and that this tenderness was much increased by pressure. The heart sounds were quite normal, but the apex beat could neither be seen nor

felt. On June 26th Mr. Lane opened the abdomen and found several adhesions between the liver and stomach causing kinking and obstruction at the pyloric end of the stomach. These were divided and the kinking and obstruction were relieved. The patient took the anæsthetic badly and after the operation was very restless. During the next few days she continued very restless and morphia was given. On the third day after the operation while lying in bed she suddenly became collapsed and died in less than a quarter of an hour. At the post-mortem examination we found a healed ulcer of the stomach near the pylorus which was evidently the cause of the adhesions that were divided at the operation. There were also other adhesions at the back of the stomach in connexion with the ulcer which had not been seen at the operation. The cause of death was apparently due to the state of the heart; it presented the most extreme instance of fatty degeneration that I have ever seen.

This case illustrates the facts that the pain bears no relation to food, that it lasts for years, and that it may be paroxysmal and may be associated with tenderness. It also shows admirably how the symptoms suggestive of adhesions may occur even if there has been no history pointing to ulcer. The kinking caused by the adhesions was not sufficient to cause dilatation. The patient's death had, as far as we could tell, nothing to do with the operation. We also learn the great importance of bearing in mind the possibility of there being two ulcers.

CASE 3.—The patient, a married woman, aged 28 years, was sent to me by Mr. R. L. Routh of Sibford-Ferris. She was admitted into Guy's Hospital on March 4th, 1901. The following is an abstract of the notes taken by Mr. L. S. H. Glanville. The patient came in for pain in the epigastric region. Her present illness began five years ago with pain there. This had gradually increased until the present time and it had often been so severe that she had had to keep to her bed. It occurred at all times with or without food. She retched a good deal but was not actually sick unless she made herself vomit by putting her finger in her throat. This she sometimes did to try to relieve the pain. The vomit was sometimes streaked with blood. She was very constipated and always had to take aperients. Her appetite was bad; she slept badly; she had lost weight of late, but then she had taken very little food owing to the severity of the pain. She had often had a morphine injection. She had been in two or three hospitals but had not derived any benefit from treatment. On admission the patient had the look of a person who was in constant pain. She was rather thin but otherwise she had a healthy appearance. Her breath was a little foul, her teeth were good, and her tongue was healthy. The only abnormality to be made out on examining her was that she was very tender in the epigastric region between the middle line and the outer part of the upper end of the right rectus. This tenderness corresponded with the position of the pain after food and in this region careful palpation gave the impression that there was something abnormal in the abdomen. The impression given was such as might be expected from peritoneal adhesions. The patient was kept under observation for 10 days. The above abdominal symptoms persisted and the pain was agonising; the patient often rolled about and cried with the agony of it; it never gave us the impression that it was hysterical. The only thing that controlled it was frequent morphine injections. A diagnosis was made of the adhesions in connexion with an old ulcer of the stomach, and, accordingly, on March 16th, Mr. Lane opened the abdomen in the middle line. There was found to be a band about half an inch wide stretching from a point on the lower curvature of the stomach about half an inch from the pylorus to the intestines lower down in the abdomen. This band was about two inches long. It could be seen that its gastric end was inserted into a gastric ulcer of about the size of a threepenny-piece, something like the insertion of the stalk of a flower into the flower, and it was clear from the position of things that any movement of the intestines would drag on it very considerably. Mr. Lane divided it and the wound was sewn up, the whole operation taking but a short time. After the operation she never had any more pain and the only morphine injection that was given was one a few hours after the operation. She made an uninterrupted recovery, leaving the hospital on April 10th. She came to show herself a week later and appeared to be in excellent health, having had no pain since the operation. In June we were told that she had pain after having gone to live at home, so we took her into the hospital to watch her for three weeks, but during the whole of that time any pain she may have had must have been slight, for she slept well, was up and about, and expressed herself much better for a little bismuth.

This case illustrates admirably the severity, long duration, and locality of the pain. In association with its severity it is interesting to note that the adhesion was attached to both the stomach and the intestine, so that contraction of the latter might cause pain. Symptoms of gastric ulcer proper were absent. There were local tenderness and a feeling of resistance over the adhesion. The value of operation is admirably illustrated and also the fact that even after a successful operation functional symptoms may return under appropriate surroundings.

CASE 4.—A married woman, aged 30 years, was sent to me by Mr. G. Pender Smith of Wivenhoe. She was admitted into Guy's Hospital on April 2nd, 1901, and she told us that her illness began 13 years ago with pain in the stomach, which was at first felt only after meals, but gradually grew worse and constant. Some days after the first onset of the pain she had a severe attack of vomiting and brought up a large quantity of bright red blood. After this she remained in bed for six weeks, subsisting mainly on nutrient enemata, as it was but rarely that she could keep anything in her stomach. Since that time she had lived almost entirely on liquid diet. Sometimes she had been free from pain and vomiting for a few weeks, but never longer, and the vomiting, as a rule, had been accompanied by some hæmatemesis. During the last few months the pain had been more severe and she thought that she had been losing weight. Morphine injections were the only thing that had relieved the pain. On admission she was thin and wasted. There were no signs of dilated stomach and the only thing that could be discovered on examination was that the abdomen was both tender and hyperæsthetic over an area about an inch square situated a little to the right of the middle line and about an inch and a half below the costal margin. She was kept under observation in the hospital for three weeks, and by means of careful feeding she gained two pounds in weight, but the pain, sickness, and occasional hæmatemesis did not improve in the slightest. Accordingly, after consultation with Mr. Lane, the abdomen was opened on April 29th. A few slight adhesions were seen binding the pylorus to the liver. These were divided. The pylorus was obviously much constricted. It was therefore divided longitudinally and sewn up transversely. After the operation the pain, vomiting, and hæmatemesis all ceased and the patient got up on May 15th. By May 20th she was taking ordinary food and had gained 11 pounds in weight since the operation. She felt quite well and looked much better than on admission. After she got home we heard that the pain and sickness had returned severely, so we had her back to the hospital and found that she was occasionally a little sick and sometimes had pain, but she was very much better than before the operation; she looked well, was up and about the ward, took ordinary food, and never had a morphine injection.

This case is extremely interesting, for although the well-marked constriction at the pylorus was not sufficient to cause dilatation of the stomach, yet apparently it was sufficient to cause severe symptoms lasting for many years. The relief following operation was very marked. The symptoms were probably much more due to direct constriction of the pylorus than to indirect constriction by adhesions, for these were slight. The severe return of symptoms at home and their comparative subsidence on her coming back to the hospital strongly suggest that there was much functional disorder superadded to the organic trouble.

CASE 5.—The patient, a woman, aged 39 years, was admitted into Guy's Hospital on April 14th, 1900, under the case of Dr. J. Fawcett, and subsequently she passed under my care. She had had chronic indigestion for four or five years; vomiting and pain came on two years ago. In August, 1899, she vomited blood for the first time and was laid up for six weeks in a hospital. She had lately suffered much from pain in the epigastrium; she had been getting worse and on April 7th the vomiting began again. It increased in severity to the 10th, when she brought up a quarter of a pint of dark blood. The vomiting of blood continued and for three days she vomited blood nearly every three hours. On

admission she was very weak, anæmic, and emaciated. She lay flat on the back and had a good deal of pain in the epigastrium. Her tongue was slightly furred. The stomach resonance extended up to the left nipple. At 9 P.M. on the day of admission she was seized with a typical severe attack of tetany. She had no more attacks of tetany during her stay in the hospital. It soon became obvious from the physical signs that the stomach was considerably dilated, and on May 19th, as washing it out since admission had made no improvement, I suggested an operation, for it seemed clear that there was obstruction at the pylorus from the cicatrix of an old gastric ulcer, and the patient's condition had not at all improved since admission. Mr. Lane subsequently saw the patient and agreed with this view. On the 22nd the abdomen was opened. The stomach seemed to be constricted about two-thirds of its length from the cardiac end by an old ulcer running right round it. There was a band running from the stomach at the side of the constriction to the gall-bladder which was much deformed. This was divided between silk ligatures. Mr. Lane divided the constriction in the stomach transversely across the scar; the incision was then stitched up in the line of the scar, thus considerably increasing the diameter of the stricture. On the 23rd the patient vomited five or six ounces of altered blood. On the 24th she vomited blood four or five times a day. On the 25th she again vomited blood and the same again on the 26th, and, indeed, she frequently vomited blood up to June 25th, and by this time she was very weak, very pale, and had lost considerable ground since the operation, therefore it was agreed to re-open the abdomen. When the stomach was pulled out, the wound made by the previous incision was scarcely discernible, having healed so well, and there was plenty of room for the contents of the stomach to pass by the previous stricture. After searching for some time a short, thick, rope-like adhesion was found on the posterior of the stomach, binding it to the under-surface of the liver. This adhesion was three-quarters of an inch long and one inch wide and white in colour. A ligature was put round it and it was divided. The stomach was further examined and found to be closely adherent to the pancreas and structures at the back of the stomach. These adhesions were freed as much as possible, some vessels requiring ligature. The adhesion to the liver already mentioned contained a vessel which caused some difficulty by bleeding, but it was finally secured. It was a long, tedious operation, occupying two and a half hours. The patient was much collapsed after it and never really rallied, sinking four days after the operation.

The post-mortem examination showed the cardiac end of the stomach to be enormously dilated and a tight constriction, due to an old ulcer, not admitting the little finger, was found three and three-quarter inches from the pylorus. There was also a more recent ulcer in the neighbourhood of it. It was quite clear that this patient had had two ulcers of the stomach, one which was successfully dealt with at the first operation, and another larger ulcer three and three-quarter inches from the pylorus, which, like the first ulcer, caused much constriction and made the stomach to adhere to the liver by a long band and tightly to the pancreas and structures at the back of the abdomen.

This case illustrates the various secondary effects of gastric ulcer; it shows well the importance of bearing in mind that there may be two ulcers. It is possible that if the patient had been seen many months earlier she might have been saved. The occurrence of tetany is interesting.

MEDICINE IN MADAGASCAR.—A school of medicine for the training of native practitioners was established in Tananarive in 1897 and according to the Paris *Caducée* of Nov. 6th it has up to the present time sent out 15 qualified men and has 104 students. The teaching staff consists of seven individuals, two of whom are civilian doctors of medicine (one European and one Malagassy) and five are medical men or pharmaceutical chemists of the colonial service. The curriculum is of five years' duration and resembles that of the schools connected with the Faculties in France. Clinical instruction is given in a native hospital of 125 beds. These native practitioners have the opportunity of competing for appointments in a newly-formed branch of the colonial medical service and will then receive salaries ranging from 1500 to 2000 francs (£60 to £100) per annum.

The Harveian Lectures
ON
TWENTY-FIVE YEARS' EXPERIENCE OF URINARY SURGERY IN ENGLAND.

Delivered before the Harveian Society of London on Nov. 7th, 14th, and 21st,

BY G. BUCKSTON BROWNE.

LECTURE III.[1]

Delivered on Nov. 21st, 1901.

MR. PRESIDENT AND GENTLEMEN,—I propose in this last lecture to consider some of the complaints which particularly concern the male urethra. The most important one is certainly urethral stricture. I well remember Mr. Erichsen, afterwards Sir John Erichsen, lecturing to his students nearly 30 years ago and telling us that a urethral stricture was almost the greatest surgical trouble that a man could have, and when we look back and consider the really fearful methods of treatment in vogue during the early part of the last century and the dangerous operations to which patients were subjected, and which even now linger amongst us, his remark is quite justified. Happily great changes have taken place and the treatment of certain disorders of the urethra has been so modified and changed that urethral strictures are undoubtedly less severe than they were and less frequently met with, and when met with are so much better treated that the modern stricture patient, if he is willing to submit to a very mild and gentle discipline, may usually view his future with perfect calm and equanimity. Strictures of the urethra may clinically be divided into two great classes—those which readily yield to dilatation and which can be kept open by the easy and periodical introduction of a bougie, and those which cannot. It is this latter class of stricture which I propose to consider to-night—that is, those which do not yield to dilatation.

It may be asked, Why should anything more be done if a patient can manage to pass his urine and if his stricture will admit a small bougie? Apart from the constant danger of complete retention of urine, there is always the possibility at any moment of a urethral abscess, which is probably at first a peri-urethral abscess, with all the subsequent dangers and troubles of urethral fistulæ, and even if no abscess forms, it is certain that in time serious vesical trouble will arise, the bladder may as it were give up the struggle and become atonied, or it may become inflamed, contracted, and intensely irritable, the kidneys will become pyelitic, and finally there will be interstitial nephritis, suppuration, and death. It was once my misfortune to watch a case for nearly 20 years where a distinguished man of science could never summon up courage sufficient to face the ordeal of a surgical operation. By occasionally passing a No. 1 gum bougie he was able to pass his urine, and a catheter of the same size relieved an occasional retention, but the patient's life was made miserable by increasingly frequent attacks of rigor and urinary fever, and after many years of chronic suffering he sank from complete renal failure. This case has much influenced my practice; the stricture dominated and spoilt the latter half of this poor man's life and determined me never to allow another case of tight stricture to continue unrelieved, without strong protest at any rate from me. I would say that if in a case of stricture a bougie as large as No. 8 or No. 9 English scale cannot be regularly passed, and passed with ease and comfort, something more radical must be attempted. This more radical treatment has very much occupied the minds of surgeons for the last 50 years.

On Nov. 13th, 1852, Professor Syme addressed a letter to the Imperial Academy of Medicine in Paris on this subject, and stated: (1) that there is no stricture truly *impermeable*, and that, if a drop of urine is able to escape, with time and care an instrument may be passed through and serve as a guide for the knife; (2) that all

[1] Lectures I. and II. were published in THE LANCET of Nov. 16th, (p. 1317) and Nov. 23rd (p. 1395), 1901, respectively.

strictures which cannot be remedied by simple dilatation admit of effectual relief only through a free division of the contracted part of the canal; (3) that the object can be attained with certainty and safety only by an external incision, in a line corresponding with the raphe of the perineum, upon a grooved director passed through the stricture; (4) that the only after-treatment required is the introduction of a catheter during 48 hours, with the subsequent use of a full-sized bougie at distant intervals; and (5) that the operation, if properly performed, is free from any risk whatever of hæmorrhage, extravasation of urine, or of fistulous opening.

Coming after Syme, Sir Henry Thompson accepted his teaching, that to ensure a good result from an incision into a stricture the stricture must be freely divided, but he thought Syme's method unnecessarily severe. He soon satisfied himself that a stricture could be thoroughly divided from the inside with greater ease and less risk to the patient than from the outside, and he has unquestionably established internal urethrotomy upon a scientific and surgical foundation.

The history of the exact inception of internal urethrotomy is a little obscure, but it is certain that in 1827 an English surgeon, Mr. Stafford of London, first brought forward his urethrotomes, which are undoubtedly the prototypes of all later instruments.

About 1865 the forcible rupture of stricture, generally called Holt's operation, attracted a good deal of notice; it consisted in passing through the stricture a small railway, along which a metallic wedge was suddenly pushed in with considerable violence, and the fibres of the stricture ruptured. I often saw this done in my early days. It was an operation founded upon thoroughly unsurgical principles and practised by those who would have had no sympathy with the views of the real nature of urinary fever which I enunciated in my first lecture. I hope and believe that the operation is now dead and thoroughly forgotten.

Then in the late "seventies" came the treatment of stricture by electrolysis; it was introduced with great *éclat* at one of our London societies. I think some 50 cases at first were published, and every one was said to be perfectly successful; there was not a single failure amongst them all. I pointed this out at the meeting as a suspicious sign, but the treatment was taken up vigorously and papers and books full of successes were published by surgeons of position. Where is the treatment now? Gone like "Hans Breitman's barty."

Of all these treatments internal urethrotomy is the operation which I believe has come to stay. It is, in my opinion, the one treatment for all strictures which will not yield to dilatation. I will briefly state what I mean by internal urethrotomy. I mean the free division—no scarifications, no nicks, no multiple incisions—but one bold, free stroke of the knife through all the fibres of the stricture in the floor of the urethra, since almost invariably the induration is most marked there. I maintain that this can only be done by an instrument which becomes practically a long knife in the operator's hand, and which is entirely under the control of that hand, subject to no mechanical restraint whatever, and cutting, much or little, when and where, just as the surgeon's tactile sense informs him is necessary. When making an accurate incision into any part immediately under the eye, or, for instance, in carving wood, we instinctively cut towards ourselves, or else from left to right, the hand thus being most appreciative, so in cutting a stricture I prefer to cut from behind forwards, or from left to right, and the instrument which permits of this and at the same time is simply a knife and nothing more is the urethrotome usually credited to Civiale and always recommended and used by Sir Henry Thompson. The blade is protruded beyond the stricture and then drawn forwards, the stricture is divided, the blade is then sheathed, and the instrument is withdrawn. All kinds of mechanisms have been devised whereby a knife sliding in a groove is driven through the fibres of a stricture, but I can as readily conceive the tendo Achillis being properly divided by a similar mechanism as I can a urethral stricture. Imagine something being put under the tendo Achillis, and distended until the tendon is tightly stretched, and then a knife running in a groove on this machine, passed under the tendon—would any practical surgeon expect the tendon to be properly divided? If all tendons were mathematically of the same thickness and toughness, no doubt a blade could be devised that would divide them in this manner, but it is precisely because all tendons and all strictures are not of the same dimensions and densities that I would as strongly deprecate the use of a machine for a stricture as I would for a tendon. It is difficult for me to express in sufficiently moderate words my disapproval of such an instrument as Maisonneuve's, which still figures in our text-books and may be taken as the type of instrument preferred by those who would make surgery anything but what it ought to be—namely, a handicraft. The chromograph can never equal the painting done by the hand, or the music of the barrel-organ that of the piano. Before, however, a Civiale's urethrotome can be introduced, the stricture must be dilated up to at least No. 6 English, and I have found in practice that it is always possible after having passed a No. 1 to do so; indeed, I can only recall one case where this was difficult. It is, however, "le premier pas qui coute," and this leads me to the question of the treatment of difficult strictures, strictures which do not come to the surgeon until instrumentation is, if not apparently impossible, at least very difficult.

In ordinary practice if a patient in such a condition has complete retention of urine the aspirator will probably be used, and it may be used several times and still the stricture be found impassable by an instrument. Syme said, and I entirely agree with him, that puncture of the bladder for retention of urine is fully warranted in military, naval, and country practice; but "when hospital surgeons confess that they frequently find it necessary to puncture the bladder the standard of professional skill is lowered to a degree which may prove injurious to the interests of the public." After aspiration of the bladder contents and continued failure to pass a catheter *per vias naturales* the modern surgeon will usually perform a perineal section, usually after Mr. Wheelhouse's method; by this operation he exposes the anterior face of the stricture by a free perineal incision and hopes to find the orifice of the stricture with his probe. If he finds the orifice a director is introduced, and the stricture is divided by a knife and a catheter is tied in. But the orifice of the stricture cannot always be found; the most consummate craftsmen have failed. My old friend Mr. Frederick Gant well remembers Professor Syme himself, during his brief surgical career in London, failing in this way in the operating theatre of University College Hospital after a protracted search. If the stricture orifice cannot be found the operator makes a hit-or-miss incision hoping to find the urethra behind the stricture. Is it surprising that incisions made in this way sometimes refuse to heal? Still the advocates, from Syme downwards, of all the varieties of perineal incision are fond of laying stress upon their innocuousness. They all affirm that no surgical proceeding is safer or more harmless. I remember that distinguished surgeon, Mr. Walter Whitehead, saying at the Medical Society of London that with an experience of some hundreds of cases he had never known a case of severe hæmorrhage. Professor Syme, as we have seen, said the same, and apparently any difficulty in healing up the perineal incision is never met with. This is not, however, my experience. As my own cases of difficulty may perhaps be put down to my fault as an operator I will not refer to them, but will confine myself to what I have seen of the practice of others. I was much interested some years ago, when attending with Dr. Marmaduke Prickett a gentleman who some 40 years previously had undergone Syme's operation by Syme's own hands, to learn that our patient's chief and very sad recollection of the operation was that he had had to pay his Edinburgh landlady three pounds for the mattress which was ruined by the free bleeding. Professor James Syme was born in 1799 and he died in 1870. The first edition of his work on Stricture of the Urethra was published in 1849. There cannot, therefore, be many of his patients living now. I have been much interested in meeting professionally with two of them; both died as old men, and both were under my care for tight urethral stricture, showing that the vaunted permanent good results of Syme's external urethrotomy were not always justified by experience. I have several times been applied to to close a perineal fistula resulting from perineal incision; and as illustrating the terrible infliction that a perineal urinary fistula is to a gentleman of refined habits I may mention that I once knew a patient so afflicted deliberately shoot himself rather than continue to be, as he imagined, an object of disgust to others. I had not operated originally, but I had made one attempt to close the fistula and had only partially succeeded and was about to operate again when the sad event occurred. This case made a great impression upon me, and with an

experience of other cases of fistula taught me to dread all external urethral incisions, and has led me now never to make them except in rare cases of prostatic and urethral calculi, where such incision is absolutely necessary. I have, indeed, gradually become imbued with the belief that in cases of difficult stricture the perineum must on no account be interfered with. This has led me slowly to discover for myself *that there are no cases of stricture, however severe, through which it is impossible to pass an instrument.* This is going further than the dictum of Syme, who said that where water came out an instrument ought to go in. This teaching was not, however, original to Syme, I believe, but was taught by Chelius and probably by others older than he, as I am told by Dr. Daniel of Epsom, an old pupil of Chelius. In making this statement that all strictures are passable by instruments whether water comes through or not, I desire to speak with great care and deliberation, for I believe that the prevention and the mitigation of much human suffering depend upon belief in this doctrine. Of course I must exclude from consideration all cases where the urethra has ceased to exist, the result of mechanical or pathological injury, and I am aware that I am not in accord with many well-known authorities. For instance, Professor Samuel D. Gross, professor of surgery in the Jefferson Medical College of Philadelphia, wrote: "But I go further, and assert, upon the testimony of personal experience, that there is a class of strictures, the result of ordinary causes, which, while they admit of the flow of urine slowly and imperfectly it may be, do not permit the introduction of any instrument, however small, into the bladder." I cannot, however, accept this teaching and prefer that of the very appropriate lines of Herrick—

> "Attempt the end, and never stand to doubt;
> Nothing's so hard but search will find it out."

Believing that an instrument, with care and patience, can always be passed through a strictured urethra, I next assert that when once an instrument has been fairly passed into the bladder it can boldly be withdrawn and replaced by one a size larger if the surgeon have confidence in himself; and finally, I have never yet met with a stricture which in this way could not be dilated up to No. 6 or No. 7 English. A Civiale's urethrotome can then be introduced and the stricture be divided. This is what I term my method of internal urethrotomy *tout d'un coup*, at one operation. The worst case of stricture may be anæsthetised, dilated up to No. 6, the urethrotome introduced, and the stricture cut to full size and left with a full-sized catheter tied in all at one sitting. I have, indeed, applied to internal urethrotomy the principle that Bigelow applied to stone—no two bites at a cherry: "If it were done, when 'tis done, then 'twere well 'twere done quickly."

Let us now consider the exact manipulation, we will not say of an impassable stricture, but of a very difficult one. In dealing with a difficult case of stricture I have long ago given up the use of filiform bougies; their use is not true surgery; it is simply blind groping and trusting to good fortune, whereas the surgeon should rely upon himself—that is, upon his sense of touch. Filiform bougies are really dangerous. When actually in the bladder they may break and lead to very unpleasant consequences. I once discovered one in the bladder of a patient after I had performed my operation of internal urethrotomy. The bougie had been there for months, having been broken off during an unsuccessful operation and left, and it had caused such great suffering that, never dreaming of what was there, I operated expecting to find a stone or some malignant growth. Filiform bougies are misleading also; no one can be sure where they really are, they may double up and really penetrate no distance, or they may pass into fistulæ or false passages. I regret to find that they are still recommended in the latest works on surgery. I once witnessed an amusing occurrence in a crowded hospital theatre. A bad stricture case was put upon the table. The surgeon was anxious to demonstrate to the students the efficacy of a bougie exactly two feet long, filiform for several inches at one end, and gradually thickening to a full-sized bougie at the other end. The filiform end was carefully passed inch by inch into the penis and there was not a hitch or difficulty of any sort. It really did appear as if the treatment of one of the most difficult of surgical diseases had been reduced to the greatest simplicity when suddenly the patient started and said that something was tickling his back, a hurried and anxious examination was made, and the bougie was discovered to have left the urethra by a perineal fistula and to have travelled some way up between the patient's shirt and body.

In the passage and dilatation of really difficult strictures I have no confidence in any instruments except steel ones. No silver catheters are strong enough, and I have even given up using the probe-pointed silver catheter of Syme, which for a long time was a favourite of mine. I prefer finely-polished rigid steel instruments, instruments which will not bend or yield under any proper force and therefore allow of the most exact and accurate manipulation. I employ a set of 16 sounds; each one is two sizes larger in the shaft than at the point, the smallest being No. 2 in the shaft and less than No. 1 at the point (marked 0-2), the next being 3 in the shaft and 1 at the point (marked 1-3), and so on up to the largest, No. 17 (marked 15-17).

The treatment which I have devised for all cases of difficulty or so-called impassable stricture is as follows, and I would first of all advise that the surgeon should arrange for a convenient time, when he is as free as possible from harassing calls and messages. It is no use—indeed, it is dangerous—to attempt a bad case of stricture in a hurry. The instruments required are the sounds just mentioned, a Civiale's urethrotome (I always carry two in case of breakdown), some blunt-ended English gum bougies, varying in size from No. 3 to No. 10, a foot rule marked in inches, and a No. 11 or No. 12 soft gum catheter mounted on a stylet for tying in at the close of the operation. The patient (except in a case of acute retention) has been carefully prepared, aperients have been administered, a bath has been taken, and the rectum has been cleared by a good enema. If an operating table be not available the bed should be made firm and level by placing the leaf of a table or a board under the mattress. Each leg of the patient is wrapt up in a blanket and a third blanket is placed across the body; the perineum and pubes are thus left exposed. The patient is then completely anæsthetised, for the urethral reflexes are the last to be anæsthetically abolished, and success depends upon the patient being perfectly quiet. A blunt-ended soft bougie is now introduced into the urethra, and the exact distance of the stricture, or in cases of multiple stricture of the anterior stricture, from the external meatus is accurately ascertained and measured. In very difficult cases the right-handed surgeon will have to stand on his patient's left, and, with his left finger in the rectum, he will steady and secure the point of the well-warmed and vaselined steel sound as, holding it in his right hand, he attempts to pass it. The finger in the rectum will be at once informed if the point of the instrument leaves the middle line. No force must be used, but a steady search must be made for the orifice of the stricture and firm but gentle pressure exerted when it is found. The surgeon "must steal in little by little," as Ambroise Paré says, referring to another subject. The operator will find after a while that the stricture yields under his hand, the instrument advances a little, and soon he is gratified by feeling the end of the sound fairly grasped by the stricture. At this moment no attempt should be made to pass the instrument, which is probably the 1-3 or next to the smallest, on into the bladder, at any rate not unless it passes forward quite easily, but it should be withdrawn and the next largest one, the 2-4, applied, and then the 3-5; by so doing the orifice of the stricture will be dilated and will not grip and retain the point of the 1-3, which may be taken up again and will now probably pass on into the bladder. Then the 2-4, the 3-5, and the 4-6 should be successively passed in. The sounds are known to be in the bladder by their shafts being felt to be accurately in the middle line and their points free in the bladder. When once the No. 6 or No. 7 sound has been fairly passed into the bladder it should be allowed to remain in place while the surgeon changes sides. He now stands on his patient's right, draws out the sound and slips in the urethrotome. If difficulty be found in introducing the urethrotome the sound must again be passed. Sometimes the urethrotome can best be lightly and gently shaken in, as it were, rather than actually directed and passed in. When the bulb of the urethrotome is fairly in the bladder there is a sensation of looseness and freedom quite characteristic, and the surgeon may feel sure that all is right. Nothing should be attempted until the surgeon is satisfied that the urethrotome is really in the bladder. When in proper position the instrument is carefully withdrawn until the bulb is an inch beyond where the stricture is known to begin, the anæsthetist is warned that the patient must be

perfectly still for a moment, the blade is then protruded and a free incision is made from behind forwards for a good inch along the floor of the urethra, and about half an inch deep. The blade is then sheathed and the instrument is withdrawn. A full-sized sound is now passed, a No. 12 or No. 13, and if, as is practically always the case, it passes easily, then the larger ones, Nos. 14, 15, 16, and 17, may be passed in succession, and then the soft catheter mounted on a stylet, curved so as exactly to correspond with the curve of the sounds, is passed in, the stylet is removed, and the catheter is tied in. The urine which is in the bladder will issue by the catheter and so show that all is right. Should there be a doubt about the catheter being in the bladder it should be withdrawn and again passed in, and on no account should any water be injected through it until there is no doubt that it is in the bladder. When the catheter, usually No. 10 or No. 11 (English scale), is secured in the bladder the operation is over. Usually the inlying catheter is well borne, and is removed in three days; in a very few cases there is irritation set up and the instrument has to be removed. I always do all that I can to persuade the patient to bear with the catheter for at least two days, as I am convinced that by its use the chances of hæmorrhage are much reduced and the pain and sometimes the difficulty of natural micturition are avoided. The patient sits up about the eighth day, and with the periodical passage of two or three well-warmed and well-oiled steel sounds—the largest, usually No. 14 (English)—the case is finished. The patient learns to pass these sounds for himself. By this method of mine the patient is not subjected before operation to painful, difficult, and often tedious instrumentation, and he is spared the old plan of dilating up the stricture by tying in a series of small catheters, each larger than the one preceding, which is certainly not the best preparation for a part which it is intended finally to incise, and above all the patient is spared a perineal incision, with all the slow recovery which necessarily follows such an operation. There is rarely any important hæmorrhage, and there is no risk of the possibility, by no means to be overlooked, of one of the most trying and disagreeable misfortunes—namely, a perineal urinary fistula. I have now had an experience of the operation of internal urethrotomy for 27 years, and I am happy to say that I have never lost a patient from it. I have only two or three times had any trouble from extravasation of urine, and when this has occurred it has always resulted from an incision in the anterior portion of the urethra, where the extravasation has been easily and safely dealt with.

The avoidance of preliminary instrumentation is important, for it is the disturbance of a difficult stricture by small instruments when the patient is not anæsthetised that is so often followed by urinary fever. The operation at one sitting is usually followed by no constitutional disturbance whatever. Internal urethrotomy at one operation, indeed, compares very favourably with operations by perineal section, and I would urge that even for the surgeon himself it is really a simpler operation. If a fine probe can be passed through the stricture by looking, surely it can be passed through by feeling, so what is gained by the dangerous incision of the urethra from the perineum? In urinary surgery nearly all our work has to be done by the sense of touch rather than by sight. The great thing before attempting a difficult task is to believe that it can be done. If surgeons will only believe that all strictures are passable, they will be prepared to attack them with more patience—and patience and common surgical sense are all that are required—and we shall have fewer of those distressing and often hopeless cases where permanent fistula follows perineal section. I therefore recommend and assert that it can be done—that in all cases where in the consulting-room a stricture is found to be impassable, or if, for the reasons which I am about to name in detail, internal urethrotomy has been deemed advisable, whether the stricture is easily traversed or traversed with difficulty, the stricture be dilated by a series of conical steel sounds, while the patient is thoroughly anæsthetised, up to No. 6 of the English scale and not beyond No. 8, that the urethrotome be introduced and the stricture cut in the floor of the urethra. A large sound, varying from No. 14 to No. 17, can then be passed and the patient may be left with a soft gum catheter tied in for two or three days. Internal urethrotomy is an excellent operation, as I have just suggested, in many cases where there is no real difficulty in traversing the stricture with an instrument. These cases may be grouped as follows under eight heads.

1. When time is an object. The patient is perhaps ordered on foreign service, or perhaps, on the eve of marriage, finds that he is the subject of stricture. The instances might easily be multiplied where it is justifiable to run a little more risk than ordinary dilatation entails in order to get the best and most permanent results possible in the shortest space of time. 2. When the stricture is at the urethral orifice or in the penile urethra it will not permanently yield to either continuous or interrupted dilatation, but must be divided. 3. In cases of stricture where the gentlest instrumental interference is followed by rigor and great prostration. If the fibres of the stricture are freely divided the use of a bougie will cease to be followed by rigor. If after internal urethrotomy the use of a bougie is still followed by rigor it will be because the operation has been incomplete, and it must be repeated more thoroughly. Men are often met with from malarious countries who continue to have agueish attacks when resident again at home. I have not infrequently found this fever to be associated with urethral stricture, and have found that the attacks disappear altogether when the stricture is divided. 4. Internal urethrotomy is required when a stricture rapidly re-contracts after dilatation. Such strictures are called "resilient." 5. Also when the deposit round a stricture is obviously large and dense, dilatation is useless, and the stricture must be cut, and sometimes requires more than one cutting operation before a satisfactory result is obtained. 6. When renal or other calculus is impacted behind a stricture, the stricture had better be divided internally, and, if possible, the calculus extracted *per vias naturales;* should this prove impossible, the calculus may be cut down upon and the division of the stricture and subsequent treatment will prevent the opening made from becoming fistulous. 7. No urethral fistula will ever heal as long as the urethra is contracted in front of the fistulous urethral orifice. Divide the stricture and keep it open by periodical instrumentation and usually the fistula will close. 8. As age advances it is not unusual, although the contrary has been stated, for the troubles of a patient suffering from stricture to be complicated by prostatic hypertrophy, making it necessary for him to pass a part, or the whole, of his urine by catheter. To do so he must have a patent and easy urethra, and as stricture tends to tighten up in elderly people many of these patients find increasing difficulty in passing a catheter of reasonable size. Here internal urethrotomy comes to our aid, for the stricture is too hard and inelastic to yield to dilatation.

I will briefly relate one typical case of treatment of difficult stricture showing what can be done by internal urethrotomy at one sitting. The patient was a man, aged 40 years. He began to have stricture trouble 15 years ago. Eight years before I saw him he was operated upon for perineal abscess and extravasation of urine, but no instrument could be passed into the bladder and not one had since been passed. No urine had issued since from the penis. He had to sit down and he passed urine through four perineal openings. A seminal discharge came through fistulæ with great pain. Being employed on a sugar plantation he wore a kilt and put up with this misery for eight years. He rested a little after his voyage to England and was then well anæsthetised. At five inches from the external meatus my instruments at first were all arrested. The sitting occupied one and a half hours. I succeeded in passing my smallest steel sound and then ran up to the 6½, put in the urethrotome, divided the stricture and passed a No. 13 steel sound and tied in a No. 12 catheter. This catheter was retained for six days; two days after this he learned to pass a catheter, and soon he was able to draw all his urine by that instrument. In 14 days his fistulæ were dry and in a month all was so well healed that he was allowed to pass urine naturally. He had been in bed only two weeks, and in three weeks from the operation was about much as usual. He returned home quite well.

Much as I dislike incising the perineum there are four conditions where it has to be done: (1) when there is extravasation of urine; (2) when pus requires an exit; (3) in some cases of prostatic calculi; and (4) in certain rare cases of urethral calculus. In the two latter instances and in one form of prostatic abscess the urethra must be incised as well. In all cases of periprostatic abscess and of perineal abscess a free perineal incision must be made at once. The mischief which may result from delay is astonishing. In prostatic abscess I have known pus burrow into the buttocks and even into the

groins, presenting there like a bubo, before incision has been made, and of course the abscess may open into the rectum, causing a rectal urinary fistula which may need months of careful treatment and may even embitter the whole of the remaining lifetime. The ordinary prostatic abscess should be opened from the perineum, but the urethra, in my judgment, should be severely left alone. There is, however, one form of prostatic abscess which I have not seen described and which needs special treatment. Two forms of prostatic abscess are usually mentioned—the periprostatic abscess and the follicular abscess. But I have occasionally been consulted by elderly men exhausted by a profuse and continuous discharge of pus from the urethra, and upon rectal examination I have found one or other prostatic lobe simply a bag of pus draining imperfectly and slowly into the urethra. There has been no periprostatic collection of pus. It is unwise to attempt to go straight into this prostatic bag of pus from the perineum for obvious reasons. I have had great success by opening the urethra behind the bulb from the perineum. I then pass the forefinger of the left hand gently into the prostatic urethra, along this finger I pass a probe-pointed director, and guided by the end of the forefinger, the probe is made to pierce the wall of the prostatic urethra from the urethra. Then a pair of polypus forceps is passed in and opened so as to dilate the wound in the prostatic urethral wall. I have found that, so treated, the abscess drains freely and recovery takes place in cases which under other treatment do not do well.

Then with reference to perineal abscess, a patient afflicted with a tight stricture sometimes without any very definite cause finds himself unwell. His perineum is hard, tender, and throbbing, and he may or may not have a rigor. We all know that a perineal abscess is in process of formation. All surgeons open such an abscess at once, giving vent usually to a large quantity of matter; in a few days urine is passed by the wound, and unless the stricture is attended to a permanent urethral fistula remains; often the stricture is leisurely attended to by dilatation, and even then the fistula is generally obstinate and a source of annoyance to the patient for years. Some surgeons are more heroic (for example, the late Dr. Van Buren of New York); they open the abscess and then divide the stricture from the outside upon a grooved staff, thus performing a Syme's operation and remedying the abscess and the stricture at the same time. The result is generally satisfactory, but all will allow that such an operation is a very serious tax upon a patient's powers and that he must remain a patient, and far from comfortable, for some four, five, or six weeks. Such an abscess as just described is not an extravasation abscess; at first it does not communicate with the urethra although it does so in a few days; it forms in the perineum outside the urethra, as Sir Henry Thompson has pointed out, just as an abscess may form by the side of the rectum without opening into it. A real extravasation abscess is not so very common; it begins by minute extravasation behind the stricture, but the formation is tedious and is preceded by a slow growing cord like process which is unmistakeable to the touch of the practical surgeon. Now my point is this: if the surgeon is prompt in dividing the urethral stricture a true perineal abscess never will communicate with the urethra and the patient will be saved all the trouble of a urinary fistula. I freely divide the stricture from inside the urethra, pass a No. 15 or No. 16 (English) steel sound, and tie into the bladder a No. 12 gum catheter per penem. I then put the patient into the lateral lithotomy position and, with my left forefinger in the bowel, I introduce a sharp narrow knife into the perineum half an inch above the anus. I go straight in until pus issues and then withdraw, and in withdrawing divide the skin upwards a little so that the finger can follow the knife; the finger dilates the opening and finds a large cavity full of pus with the urethra filled by the catheter lying above, almost, as it were, dissected away from the surrounding tissues. As a rule this one opening will suffice to drain the abscess, but I have had to make a more dependent opening in the buttock. The catheter should remain in about three days. Patients treated in this way, I find, make easy and rapid recoveries.

In concluding this lecture on the urethra I would submit that while it is very easy to cut into a urethra it is sometimes very difficult to heal up the incision and that a urethro-perineal fistula is a lamentable complaint. The urethra should never be opened in any case of vesical calculus, urethral stricture, perineal abscess and extravasation, or for any vesical exploration or drainage, or for any prostatic operation. I would look upon urethral incision in these cases as a surgical mistake.

ANATOMICAL PREPARATION-MAKING AS DEVISED AND PRACTISED AT THE UNIVERSITY OF EDINBURGH AND AT THE HUNTERIAN MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

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(Concluded from page 1403.)

TOWARDS the end of 1862 I was appointed first assistant in the Hunterian Museum of the Royal College of Surgeons of England, founded by the illustrious John Hunter, where Cliff, Owen, and Queckett had been conservators, and where Paget and Huxley often worked. The museum afforded endless opportunities for dissecting, injecting, making, and mounting anatomical preparations of all kinds. It possessed vast stores of human and comparative anatomy stowed away in tanks, jars, bottles, &c., and fresh material was sent in quantity from all parts, especially from the Zoological Gardens in Regent's Park, and the various London hospitals. I found the higher dissection at the Hunterian Museum at a very low ebb. The museum could boast many magnificent specimens, the work of the famous John Hunter and others who followed him in bygone days, but fine modern preparations were conspicuous by their absence. As a matter of fact, no new high-class dissections or injections were being made, the authorities largely contenting themselves with remounting old specimens and keeping the collections in a state of efficiency. The art of making original dissections and injections had apparently been lost. There was, moreover, something like stagnation in the upper workrooms of the museum which I occupied and where dissecting, injecting, and remounting were carried on.

I was allowed two assistants, Thomas and William Pearson (father and son). Old Tom the father was very gouty and somewhat frail, but a fine specimen of a frank, genial Englishman. His work consisted in remounting specimens and attending to store preparations. William, the son, waited upon me and performed minor offices in my department. He was a well-grown, good-natured lad, 18 or 20 years of age, with a plain education, and no knowledge either of anatomy or dissecting or preparation-making. I found him useful and faithful, and, as he took an intelligent interest in my work, I was delighted to teach him everything. He was very painstaking and ultimately became a first-rate dissector. I give these details as he is the only individual living who knows and has practised my peculiar modes of dissecting, injecting, and preparation-making. This he has done for over 30 years with great advantage to the museum and profit to himself.

There were at the Hunterian Museum three work-rooms in all, situated at the top of the building. These rooms were, when I entered on my duties, in a most insanitary condition. They were crowded with large and small jars and bottles containing vegetable and animal specimens of every conceivable kind. As the lids and stoppers of many of them were imperfect, and the spirit in which the specimens were immersed had evaporated, the contents in many cases were semi-putrid and evil-smelling to a degree. As a consequence the atmosphere was laden with foul spirit and decomposing vegetable and animal matter sufficient to engender a plague. I at once set about sweeping out the Augean stables and had all the jars and bottles overhauled, useless specimens thrown away, and fresh spirit added to such as were to be kept. The jars and bottles were also carefully stoppered. The amount of soiled spirit liberated during my cleansing operations, and which under ordinary circumstances would have been thrown away, was sufficient almost to float a Spanish galleon. In order to prevent what would have been culpable waste I had a small rectifying still erected, similar to that

employed in the anatomical department of the University of Edinburgh. Prior to my arrival all old and foul spirit was destroyed. The spirit employed in putting up preparations of every kind even new preparations, was diluted methylated spirit with a distinctly yellowish tinge. Pure white, limpid, re-distilled spirit was unknown to Mr. W. H. Flower, the conservator, and to the museum authorities.

With a view to protect myself from the unsavoury, unwholesome atmosphere of the upper workrooms I invariably worked at an open window, preferring occasional colds to possible blood-poisoning. William Pearson was always at my elbow, as I required him constantly for holding, tying, cutting, cleaning instruments, attending to syringes, preparing injections, hot water, &c. I had always a kettle with boiling water on the fire in winter and a saucepan with boiling water on a Bunsen burner in summer. Boiling or very hot water was my sheet-anchor in every kind of dissection. My dissections were generally made in cold water. They were, however, invariably finished by the aid of hot water in a manner to be presently explained. I made hot and cold injections, but greatly preferred the latter worked up and finished in hot water, as they did not shrink on cooling and always looked plump and fresh. I employed gelatin variously coloured for my hot injections, and white of egg, farina of various kinds, and plaster-of-Paris for my cold injections. The plaster-of-Paris injections, which were my invention, were especially successful. They took the most brilliant colours, did not shrink, and could be worked up in cold or hot water as desired. They, moreover, could be indefinitely preserved in spirit which they did not in the least discolour.

During my first year at the Hunterian Museum (1863) I devoted a considerable amount of time to devising and perfecting new modes of dissecting, injecting, and preparation-making and mounting. In this year I introduced the following novelties in museum-work in London: (1) the re-distillation and purification of foul spirit as carried on at the anatomical museum of the University of Edinburgh; (2) a new form of preparation-jar with flat ground top and glass cover as devised by Professor John Goodsir; (3) my hot-water methods of dissecting employed by me in Edinburgh in 1858, 1859, and 1860; (4) my mode of injecting blood-vessels with liquid plaster-of-Paris coloured red for the arteries, and blue for the veins; (5) my method of distending the hollow viscera (heart, stomach, intestine, bladder, and uterus) and cavities generally with liquid plaster-of-Paris variously coloured; (6) my plan of mounting dissections for teaching, examination, and museum purposes in liquid plaster-of-Paris run into the bottoms of large flat jars, capsules, and troughs, containing spirit and covered with glass lids (as the plaster-of-Paris was coloured with ultramarine blue the dissections were thrown out in relief, the effect being highly artistic); and (7) my mode of dividing the human body into sections by the aid of a very thin, finely toothed saw. By this means I obtained beautiful lateral, antero-posterior, and transverse sections of the head and neck, the brain and soft parts being supported by the bones, cartilages, and hard parts. I also got fine sections of the human foot and other parts.[1]

At the end of my first year in the Hunterian Museum an exhibition of the specimens (anatomical, physiological, and pathological) prepared during the year was held in the theatre of the Royal College of Surgeons of England. It was open to the scientific and professional public. Everyone seemed pleased with the quantity and quality of the work done. It was a novelty in London to see highly-finished dissections mounted in pure, colourless spirit in crystal jars with glass lids which admitted a flood of light. Similar annual exhibitions were held each year while I was in office. At these exhibitions anatomists, physiologists, physicians, surgeons, and other distinguished men were frequently present, and in this and other ways I was privileged to make the acquaintance of nearly all the leading medical and scientific men in London and the provinces—Sir William Lawrence, Sir William Ferguson, Sir James Paget, Sir George Burrows, Sir Thomas Watson, Professor Owen, Professor Huxley, Professor Sharpey, Professor Humphry, Professor Rolleston, Charles Darwin, Lockhart Clarke, Sir Andrew Clark, Sir Richard Quain, Dr. W. B. Carpenter, Sir John Lubbock, Dr. St. George Mivart, Dr. Edward Gray, Dr. Albert Günther, Dr. James Murie, Sir B. W. Richardson, Sir T. Spencer Wells, Dr. John Rae, Sir William S. Savory, Mr. Wheelhouse, Sir Samuel Wilks, and others.

As is well known, the Royal College of Surgeons of England, in addition to being the proprietors and custodians of the Hunterian Museum, are also a great examining body. During my term of office at the museum the examinations for Membership of the College were held in the theatre of the College adjoining the museum, but all under the one roof. At certain periods of the year a number of medical students from the several London hospitals called "prosectors" came to the College to dissect bodies for the examinations. The dissections in some cases were none of the best, and as fresh dissections had to be made for every examination it occurred to me that much time and labour would be saved if I supplied the Court of Examiners with a set of carefully prepared permanent examination specimens. I carried out my intention as follows. I procured a number of large, flat glass jars and earthenware troughs of various shapes, having a diameter of from 12 to 18 inches. The upper edges or rims of these were ground flat to receive glass lids which could, if required, be hermetically sealed. When the dissections, prepared according to the hot-water method, were made I ran coloured liquid plaster-of-Paris (preferably dark blue) into the bottoms of the jars and placed the dissections in the plaster-of-Paris before it set. The result was artistic to a degree. The coloured plaster-of-Paris contrasted finely with the pale dissections and made them stand boldly out. I injected the blood-vessels also with coloured liquid plaster-of-Paris—the arteries red, the veins blue. The specimens prepared in this way consisted of:—1. Sections which I made with a thin, fine-toothed saw of the head and neck—vertical, antero-posterior, and lateral, also horizontal or transverse—at intervals of an inch or so, showing the nares, cavity of the mouth, fauces, pharynx, vocal chords, brain, and skull, *in situ*. Similar sections (antero-posterior views of the brain, skull, and soft parts) were put up permanently in glass jars in Room V. of the Museum. 2. Sections of the foot—bones and soft parts. 3. Dissections of the viscera. 4. Dissections of the muscles, blood-vessels, and nerves of various regions. 5. Dissections of glands, ligaments, tendons, &c. These examination specimens, prepared and mounted permanently as described, were humorously designated "pickles" by the students, and I fear gave badly prepared men some trouble. They have now, I am glad to find, come into general use in the various teaching and examining institutions in this and other countries. So highly pleased was the Court of Examiners with the so-called "pickles" that the President of the College, Mr. John Hilton, was instructed to offer me an honorarium for the extra labour involved and as an acknowledgment of the new method. This I respectfully declined.

As my hot-water method of dissecting the muscles and tissues generally has never been described or published the following short account may prove interesting and welcome. Supposing a human forearm was to be dissected the following was the mode of procedure. I first carefully dissected the part with a scalpel and forceps in the ordinary way as I would a dissecting-room specimen. I then placed the part in a trough of cold water and re-dissected it under water with forceps and scissors, chiefly the latter. The re-dissection under water was a tedious process and required much care and patience, the amount of fat, cellular and other tissue, to be removed being quite extraordinary. This done, I raised the dissection to the surface of the cold water and poured over its several parts in succession, from a wide-mouthed jug, hot water just off the boil. The result was the immediate shrinkage and permanent disappearance of all fat, cellular and other tissue, fluff, &c., which had escaped the scissors and which so greatly disfigure ordinary dissections when placed in fluids. Dissections made by the hot-water method present a smooth, more or less polished surface. Great care and skill were required in applying the hot water. If the water was too hot or too long

[1] The following is taken from the Annual Report of the Conservator (Mr. W. H. Flower) to the Museum Committee of date Jan. 6th, 1864. It deals with work done in 1863. "The only other point to which the conservator feels it necessary to call the attention of the committee is the work performed by Dr. Pettigrew during the year. Of this only a portion is seen in the new preparations in spirit, physiological and pathological, now exhibited. Much time of his first year has necessarily been expended in arranging the workrooms, the condition of which, both as to cleanliness and general convenience, has been greatly improved. A considerable number of experiments have also been made as to the best materials for injecting blood-vessels and the method of displaying hollow viscera, the successful result of which quite justifies the expenditure of time they have occasioned. Preparations for the anatomical examinations for the Diploma of the College have also taken up much time; and many specimens which are partially dissected, not being quite ready for exhibition, will fall into next year's series of additions."

applied the part of the dissection which was being dealt with was made to contract too much. This catastrophe was avoided by suddenly dipping the part of the dissection under treatment in the cold water, which corrected the mischief. A moderate application of the hot water effectually got rid of the cellular tissue and fat of muscle, but a larger quantity was required in dealing with blood-vessels, fasciæ, tendons, ligaments, and bones. In the case of muscle the hot water was applied until the cellular tissue disappeared and the muscles were sufficiently shrunk to present a normal appearance. In the case of blood-vessels it was applied until the cellular and fibrous structures presented a compact, even surface. In the case of nerves (the nerves of the heart which, as explained, required special treatment excepted) it was applied sparingly and only until the strands of nerve-fibres were brought into relief. In the case of glands, the dissector had to use his discretion. By a judicious use of hot water all the tissues of the body can be perfectly cleaned and rendered more or less taut relatively to each other. In this way the flaccid, dragged appearance presented by ordinary dissections is avoided. When every part of the specimen had been carefully subjected to the hot-water treatment the dissection was placed in a trough of weak spirit and dissected a third time. The third dissection in weak spirit was final and not usually a serious business. The specimen was then suspended by silk threads in a crystal jar containing rectified spirit and hermetically sealed, preferably by the aid of a glass lid fixed with acetic acid. Dissections made by me according to the hot water method over 30 years ago are as good to-day as when first put up. They will, I believe, practically last for ever if kept supplied with spirit of the requisite strength. All such preparations require to have fresh spirit added occasionally—to make good the deficit caused by slow evaporation.

The plaster-of-Paris injections were made as under. Nozzles or short end tubes adapted to the point of the syringe to be employed in injecting were fixed in the blood-vessels, hearts, hollow viscera, &c., the whole being immersed in cold water in a deep basin by themselves. A handful or more of the finest plaster-of-Paris procurable was then dropped into two separate basins, each of which contained a given quantity of cold water, the water in the one case being coloured with vermilion, and in the other with ultramarine blue. When the liquid plaster-of-Paris, coloured as explained, was of the consistency of cream it was gently drawn into the interior of the syringe to prevent the ingress of air. The point of the syringe, charged with liquid plaster-of-Paris minus air, was then inserted into the nozzles fixed in the blood-vessels and structures to be injected and the contents were slowly driven home. This form of injection must be done expeditiously, as a period arrives when the plaster-of-Paris sets very quickly and refuses to flow. Plaster-of-Paris when once set is not disintegrated by the action of spirit, neither does it shrink nor appreciably diminish in volume when exposed to spirit or hot water. It, moreover, gives off no colour, which is important. It is advisable when making plaster-of-Paris injections to clean out the nozzles, syringes, and basins at once with cold water. If this precaution be not taken endless trouble follows, it being next to impossible to remove the plaster-of-Paris when once set.

The more I employed the hot-water method of dissection and the cold mode of injection with liquid plaster-of-Paris, the more I was convinced of their value for teaching, examination, and museum purposes. In the old days specimens to be injected were slowly heated up in warm water and hot injections of various kinds gently forced into the blood-vessels, the specimens being dissected in cold water or in cold diluted spirit. As everything contracts on cooling the specimens prepared in this way looked withered and shrivelled when finished, a state of matters not improved by preserving them in spirit, which increases the shrinkage. According to the hot-water method introduced by me all these defects are avoided. In the new method the specimens in the first instance are placed in cold water and are injected with cold material—farina, flour, white of egg, and plaster-of-Paris. They are then dissected in cold water, hot water a little below the boiling-point being applied to them as the dissection proceeds. Specimens prepared by the new method do not shrivel when placed permanently in spirit; on the contrary, they present a fresh, full, blooming appearance. It should be stated that in the hot-water process the heat employed in finishing the specimens causes sufficient shrinkage to prevent further shrivelling when the specimens are finally placed in spirit for permanent preservation. The shrinkage obtained by the hot-water process is of the utmost importance, as it enables the dissector to contract and tighten tissues of all kinds which may have been dragged out and rendered flaccid during the process of dissection. By continually raising the temperature of the hot water a flaccid muscle can be made to assume the shape and position natural to it in a state of contraction or semi-contraction. This explains the taut condition of the tissues in my dissections of all parts of the human body and of the lower animals, especially their muscular arrangements.

The hot-water method of dissecting and making anatomical preparations, coupled with the cold plaster-of-Paris injections of blood-vessels, hollow viscera, &c., and the mounting of dissections in liquid plaster-of-Paris placed in the bottoms of flat glass jars, capsules, and earthenware and other troughs containing spirit and covered with glass lids practically revolutionised the art of preparation-making and introduced not only an element of stability, but also a distinctly artistic element. My methods were available equally for the largest and smallest specimens and results not hitherto dreamt of were attained. It was possible to inject, to dissect, and to preserve a hip and thigh, a leg, an arm, or any large portion of the human body, or of the bodies of animals. Characteristic and outstanding specimens of human muscular dissections made by me by the hot-water method are to be seen in Room I. of the Hunterian Museum of the Royal College of Surgeons of England. Reference should also be made to the muscular fibre dissections of the stomach, bladder, and uterus, to be described presently. As examples of cold injections with plaster-of-Paris the series of preparations illustrating the movements of the valves of the vascular system in vertebrates should be mentioned. In this series the blood-vessels and the cavities of the auricles and ventricles of the heart are injected with liquid plaster-of-Paris coloured red and blue. Mixed dissections, that is, dissections displaying muscles, blood-vessels, nerves, &c., are to be found in the comparative anatomy series. Examples of ordinary vermilion and other injections by me also occur in this series. The human and comparative physiological series of dissections and injections between the years 1863 and 1868 were all made according to my methods, either by myself or by my assistant, William Pearson, under my immediate supervision. The cold injections and hot-water dissections were greatly admired by American visitors and I had a tempting offer to cross the Atlantic and to commence operations on the other side. This offer I did not accept from patriotic and other considerations.

In the years 1863 and 1864 I planned and commenced an elaborate series of dissections and injections of the human body, and of the bodies of the lower animals on the hot-water and plaster-of-Paris methods. As a first instalment I took up the hollow viscera—namely, the heart, bladder, stomach, intestine, and uterus in man and animals. These I injected and distended with coloured liquid plaster-of-Paris. I then dissected the blood-vessels, nerves, and muscular fibres of each by the hot-water process. I also, as already indicated, devised, and in large measure executed, a series of carefully finished hot-water and plaster-of-Paris dissections and injections for examination purposes, the dissections being placed in liquid plaster-of-Paris run into the bottoms of large flat glass jars, capsules, and troughs filled with spirit and covered with glass lids. The various sets of dissections here referred to were all in hand at the same time and were advanced by stages as suitable material came to the museum and was available. I worked at these continuously from 1863 to 1868, when I resigned my appointment at the museum from failing health.

In addition to what I called the physiological series, a large number of pathological specimens were dissected and prepared on the hot-water system mainly by my assistant, William Pearson. During the years 1863 and 1864 I made an extensive series of plaster-of-Paris injections and casts of the blood-vessels (arteries and veins), and of the several compartments of the heart, my object being to show how the valves of the blood-vessels and of the heart acted. I set the valves in motion by the liquid plaster-of-Paris, and when it set I could remove the walls of the blood-vessels or the walls of the auricles and ventricles in such a way as to display the valves in every possible position. The plaster-of-Paris injections gave exact casts of the blood-vessels, whether arteries or veins, and of the several compartments of the heart, and also of the valves and sinuses or pouches behind the valves. Further, they fixed the valves of the heart, arteries, and veins in various and perfectly natural positions. Lastly,

they gave the precise forms assumed by the blood and the valves at every stage of the diastole and systole of the heart. They conclusively proved that the blood takes a spiral form within, and is spirally ejected from, the ventricles during the systole, and that the semilunar and auriculo-ventricular valves are spirally opened and spirally closed. A result so novel could scarcely have been foreseen. The proof obtained by the liquid plaster-of-Paris methods cannot, however, be gainsaid. The vascular series of dissections and plaster-of-Paris injections and casts are 32 in number and form part of the permanent collection of the museum. They were considered worthy of separate descriptions in the museum catalogue. The results of this research which entailed an examination of the entire valvular arrangements in the fish, the reptile, the bird, and the mammal were communicated on March 21st, 1864, in the form of a memoir to the Royal Society of Edinburgh and published in the Transactions of that society with two plates (57 figures), the same year. The title chosen for the memoir was "The Relations, Structure, and Functions of the Valves of the Vascular System in Vertebrata." As I was most anxious to give faithful representations of the movements of the cardiac and other valves and of the varying shape assumed by the blood during the diastole and systole of the heart, I took photographs of my vascular preparations on the roof of the museum. These I developed in a small, improvised dark-room under considerable difficulties. The results obtained were so satisfactory that I urged the College authorities to construct a proper photographic studio and dark room on the leads for museum purposes generally. The subject was considered, but nothing came of it. Progress is proverbially slow. It was not until the year of grace 1888 that a fitting photographic studio was erected. In that year a storey was added to the museum and the claims of photography were duly recognised. Nothing daunted I continued my photographic operations on the roof in the clear morning light. I photographed in succession my dissections of the muscular fibres of the bladder and of the stomach and uterus. The bladder dissections, 45 in number, were finished in 1865, and a memoir based on them was communicated to the Royal Society on June 21st, 1866. It was published in the Philosophical Transactions of the Royal Society in 1867 with three plates (56 figures), under the title, "The Muscular Arrangements of the Bladder and Prostate and the Manner in which the Ureters and Urethra are Closed." The bladders dissected included those of man and the lower animals; they are permanently preserved and catalogued in the Hunterian Museum. The bladder dissections were made as follows. I fixed an injecting nozzle or end tube in the neck of the bladder and placed both in a deep basin of cold water. I then added a handful or more of the finest plaster-of-Paris to a given quantity of cold water in a second basin; the water being deeply coloured with ultramarine blue. When the coloured cold water and plaster-of-Paris were thoroughly mixed by stirring with the hand, and were of the consistence of thick cream, I slowly filled the injecting syringe to prevent the admission of air into it and cautiously distended the viscus, taking care to move it about between the hands in the cold water, in order to preserve its shape while the plaster was setting. The degree of distension could be regulated at discretion. As the deep blue plaster-of-Paris shone through the thin walls of the bladder, the muscular fibres, nerves, and blood-vessels were thrown into bold relief and could be traced and dissected without difficulty by the aid of hot water. This plan had the great merit of putting everything on the stretch and so securing the relative position of the muscular fibres, nerves, and blood-vessels to each other. The arrangement lent itself admirably to the hot-water process of dissection.

The dissections of the stomach were made in precisely the same way with the following slight difference (in some cases) for human stomachs. The walls of the human stomach being in some instances exceedingly thin, so thin, in fact, as only to furnish continuous layers in certain parts, the stomachs were artificially shrunk before being distended with liquid plaster-of-Paris. The shrinkage was effected as under: the pyloric end of the stomach was tied off and the injecting nozzle fixed in the œsophageal or cardiac end of the stomach. A small quantity of nearly boiling water was then injected into the stomach and the stomach was sunk in a trough of very hot water. The walls of the stomach being bathed by hot water on either side shrunk to the desired dimensions. The water in the interior of the stomach was then withdrawn, and cold, liquid, coloured plaster-of-Paris was made to take its place. The human stomachs so prepared were dissected by the aid of hot water, as in other cases. The stomach dissections, 17 in number, included those of man, the monkey, horse, bear, cat, dog, sheep, and porpoise, and form part of the permanent collection of the museum. They were made the subject of a memoir communicated to the Royal Society in June, 1867, with two plates (24 figures), an abstract of the memoir appearing in the Proceedings of the Royal Society for June 20th, 1867, under the title, "On the Distribution of the Fibres in the Muscular Tunics of the Stomach in Man and other Mammalia."

The dissections of the uterus, 10 in number, were made in the same way as those of the bladder. The arrangement of the muscular fibres in the stomach, bladder, uterus, and heart closely resemble each other. They all form characteristic figure-of-8 loops, the loops being arranged in more or less perfect layers.

The dissections of the muscles (voluntary and involuntary), blood-vessels, nerves, &c., of the human body and of the bodies of animals were all made by my hot-water and plaster-of-Paris processes. These are now sufficiently numerous to fill a whole museum, and occupy a unique position in the annals of anatomy. Not only did I design this great series but, as already partly explained, I actually dissected and mounted in great specially-made glass jars, with glass lids, some of the largest and most important of them.[2]

As illustrative examples of human muscular dissections made by me, during my term of office, by the hot-water method I would direct the attention of the reader to the following, contained in Room I. of the Hunterian Museum of the Royal College of Surgeons of England, and duly described in the museum "Catalogue of Dissections and Models illustrating Normal Human Anatomy":—No. 29: superficial muscles of the left scapula and upper arm. (This is a large and illustrative dissection.) No. 34: superficial muscles of the left forearm and hand. (This is one of the most finished muscular dissections in the museum.) No. 35: deep muscles of the left forearm and hand. No. 40: superficial muscles of the right hand. No. 43: right-hand dorsal

[2] The following extracts bearing on this subject are from the annual reports published by the conservator of the museum, Mr. W. H. Flower.

"*Physiological series.*—It only remains now to speak of the preparations preserved in spirits, added during the year, mostly prepared either by or under the immediate superintendence of Dr. Pettigrew, assistant in the museum. In number these considerably exceed those of the past year. They include a series illustrating the structure and action of the valves of the heart and of the blood-vessels. As the value of these most instructive and beautifully-prepared specimens must be much enhanced by an account of the special points they are intended to illustrate, it has been thought desirable to append to this report a concise description of each of these preparations. Since their completion Dr. Pettigrew has been engaged in making a series of preparations demonstrating the arrangement of the muscular fibres of the urinary bladder" (Report of date Dec. 31st, 1864).

"*Physiological collection.*—The addition of specimens in spirit to this department, having chiefly in view the increase of preparations illustrating normal human anatomy, has mainly occupied Dr. Pettigrew's attention during the year (1865–66). Among those now shown to the committee is an extensive series of very highly-finished preparations, exhibiting in an exhaustive manner the disposition of the muscular fibres of the human bladder. The results obtained in the dissection of these specimens have been described by Dr. Pettigrew in a paper read before the Royal Society on the 21st of last June. Besides these, a commencement has been made of a series of preparations showing in a permanent manner the voluntary muscles of the human body, to be followed, if the committee think it advisable, by others, which will afford a complete exposition in detail of every portion of the body. The amount of time and labour expended in the production of such preparations is very great; and as there are sometimes difficulties in obtaining suitable materials when required, the completion of such a series as is contemplated will occupy several years; but, if carried on as now commenced, this College will be able to show a museum of human anatomy unrivalled by that of any other collection in the world" (Report of date July 2nd, 1866).

"*Physiological collection.*—Dr. Pettigrew has also, as in previous years, made some instructive preparations illustrating human anatomy. These are quite irrespective of the large and beautiful series prepared expressly for the Court of Examiners" (Report of date July 1st, 1867).

"*Physiological series.*—The old collection remains in the same condition as before. ..... In the meanwhile, additions are continually being made as opportunities occur. Many of those shown on the present occasion are the work of the late assistant in the museum, Dr. J. B. Pettigrew. This gentleman in January last resigned the office he had held for five years on account of an impairment of vision (it may be hoped, only temporary) occasioned by over-exerting his eyes in following out a series of minute researches. ..... I am glad to take this opportunity of acknowledging the numerous improvements in the methods of preparing and mounting anatomical specimens which Dr. Pettigrew introduced into the institution, and especially in originating a higher standard of excellence in finishing preparations in spirits than had been thought necessary before, and which I hope will never be departed from" (Report of date June 29th, 1868).

and plantar interossei. No. 104: superficial muscles of the left half of pelvis, hip, and thigh. (This is the largest muscular preparation in the museum and one of the most striking.) No. 112: superficial muscles of the left leg and foot—a typical specimen. No. 113: deep muscles of the right leg and foot. No. 118: superficial muscles of the left foot. No. 119: ditto second layer of muscles of the right foot. No. 121: ditto third layer of muscles of the left foot. Nos. 181, 182, 274, 275, 276, 286, 287, and others of the catalogue were also dissected and prepared by me by the hot-water method.

In addition to these, and also forming part of this great series, though separately catalogued and placed for convenience in Rooms IV. and V. of the Hunterian Museum, are my elaborate hot-water dissections, plaster-of-Paris injections, casts, &c., over 100 in number, as follows: (1) my dissections, plaster-of-Paris injections, casts, &c., of the heart, blood-vessels, and valves of the vascular system in vertebrata; (2) my dissections of the muscles, blood-vessels, and nerves of the bladder, prostate, &c.; (3) my dissections of the muscles and nerves of the uterus in the human female, the cow, mare, sheep, bitch, guinea-pig, &c.; (4) my dissections of the œsophagus, stomach, &c., in man and in the lower animals; and (5) my sections made with a fine saw of the human foot and head showing the scalp, skull, brain, and other parts *in situ*. These saw-cut sections, so far as I know, were the first of their kind. Some years later Braune of Leipsic sawed frozen human bodies in all directions and with remarkably good results. The practice has now become quite common. Latterly plaster-of-Paris casts have been taken of the sections, and the several parts displayed coloured to imitate nature. These coloured plaster-of-Paris casts of the sections leave nothing to be desired for teaching and examination purposes.

During the years 1866 and 1867 an unusually large number of pathological specimens were prepared and mounted for the museum. I found time, however, to add a considerable number of finished dissections to the great anatomical and physiological series. Amongst them I may mention (1) the deep muscles of the human forearm and hand; and (2) the deep muscles of the human leg. These two dissections prepared by the hot-water method are to be seen in Room I. of the Hunterian Museum and are numbered 35 and 113 in the "Catalogue of Dissections and Models illustrating Normal Human Anatomy."

Having from 1863, and previously to that date, taken a keen interest in, and made numerous dissections and experiments on, the subject of flight, I in 1866–1867 injected the air-sacs and hollow bones of the swan and goose with liquid coloured plaster-of-Paris in order to ascertain what part, if any, the heated air contained in these cavities played in the production of flight. After carefully investigating the subject I came to the conclusion that the hollow bones and air-sacs had nothing whatever to do with flight, and for the following reasons: (1) bats and some of the fastest flying birds have neither hollow bones nor air-sacs; (2) birds which do not fly, such as the emu, have air-sacs; (3) air-sacs are found in animals never intended to fly (of these I may mention the air-sacs connected with the larynx of the orang-outang and the gular pouch of the bustard); and (4) the heated air imprisoned in the air-sacs of flying birds is so insignificant in quantity that it can exert no appreciable influence in elevating the bird.

In March, 1867, I delivered a lecture on the Various Modes of Flight in Relation to Aeronautics at the Royal Institution of Great Britain, in which I pointed out that contrary to all expectation the wing of the insect, bat, and bird is a screw structurally and functionally, and that it strikes downwards and forwards during the down stroke, and not vertically downwards, or downwards and backwards, as was universally believed. I also demonstrated in a memoir communicated by Professor Huxley to the Linnæan Society in June, 1867, that the wing forms a figure-of-8 track in space when the flying creature is artificially fixed and that the figure-of-8 is opened out or unravelled and describes a waved track when the flying animal is advancing freely in space.[3] Professor E. J. Marey, of the College of France, Paris, corroborated my views as to the figure-of-8 and waved movements made by the wing some two years after I announced the discovery.[4]

Later, Professor Marey says: "I have ascertained that in reality Mr. Pettigrew has been before me and represented in his memoirs the figure-of-8 track made by the wing of the insect and that the optic method to which I had recourse is almost identical with his. But we differ entirely as to the interposition of the trajectory seen by us both. I hasten to satisfy this legitimate demand and leave entirely to Mr. Pettigrew the priority over me relatively to the question as restricted."[5] Professor Marey in his admission of priority endeavours to make a distinction without a difference, for in another place when speaking of the optic method by which the figure-of-8 was revealed to me, and subsequently to him, he writes: "We have seen, when treating of the mechanism of insect flight, that the fundamental experiment was that which revealed to us the figure-of-8) course of the point of the wing throughout each of its revolutions. Our knowledge of the mechanism of flight naturally flowed, if we may so say, from this first notion." As a matter of fact, the so-called restriction of Professor Marey consisted in an erroneous and inaccurate representation of my descriptions and drawings of the figure-of-8 and waved movements made by the wing published in the twenty-sixth volume of the Transactions of the Linnæan Society, to which allusion has been made. Professor Marey also blundered as to the figure-of-8 spiral movements made in locomotion generally and as to the screw configuration and function of the travelling organs of animals as a whole. It is easy to apply recording apparatus (the graphic method) to illustrate and to verify a principle once discovered and explained, and this is all that Professor Marey has done so far as the figure-of-8 and waved movements made by the wing are concerned. Mere mechanical corroboration, however, does not invalidate the original discovery, neither does it establish a claim to any part of the original discovery as Professor Marey seems to think.

In the latter part of 1866 and the early part of 1867, there was, as indicated, a great pressure of work at the museum and also in making dissections and preparations in connexion with the examinations of the Royal College of Surgeons of England, and in order to overtake it three medical students were temporarily employed. I showed them how to inject with liquid plaster-of-Paris and to mount dissections in coloured plaster-of-Paris run into the bottom of flat glass jars and troughs containing spirit and covered with glass tops, but I did not explain to them how to make hot-water dissections as practised by myself and subsequently by my assistant William Pearson. Mr. Moseley was the best of the temporary helps. He did some very good work, but his dissections presented a bleached, soft, sickly appearance from his having soaked them in acids. Two of his best specimens are to be seen in Room I. of the Hunterian Museum. They bear numbers 165 and 168 (nerves, &c., of face) in the museum "Catalogue of Dissections and Models illustrating Normal Human Anatomy." The following notice of the dissections prepared for the examinations of the College appeared in THE LANCET[6]:—

Anatomical Preparations at the College of Surgeons.

Under the above heading in THE LANCET of the 13th of October we gave an account of the preparations which have been specially dissected for examinational purposes at the College, and regret to find that we did scant justice to the original projector of the method of preserving these dissections—Dr. J. B. Pettigrew, the able assistant in the College museum. As our notice excited considerable attention among those members of the profession engaged in teaching anatomy, we may state that the preparations were begun by Dr. Pettigrew in 1863, and have been more or less in progress ever since; and that the assistance of the present prosector (Mr. Moseley) has only been called in during the last few months, owing to Dr. Pettigrew's other engagements. Those who have examined that gentleman's splendid dissections of the muscles preserved in the museum, and exhibited at the annual election last summer, will fully understand what an able and painstaking dissector is Dr. Pettigrew. The method of employing plaster-of-Paris to fill hollow viscera is well seen in the elaborate series of dissections of the human bladder made by Dr. Pettigrew, and now added to the Hunterian Museum; and his system of throwing dissections into relief by mounting them in coloured plaster, pursued in the preparations for examination, is well worthy of imitation. The best colouring-matter is found to be ultramarine, the beautiful blue of which forms a capital contrast to the partially whitened tissues. This is added to the water to be mixed with the plaster-of-Paris, which is made sufficiently thin to flow easily around the dissection placed in a shallow pan. The plaster sets almost immediately, and may be kept in spirit for any length of time without becoming discoloured. The edge of the pan having been previously ground, a plate of glass fits closely upon it, and prevents any but insignificant evaporation.

The following appeared in the *Medical Times and Gazette*[7]:—

The Anatomical Preparations at the College of Surgeons (London).

We had recently an opportunity of examining the dissections

[3] On the Various Modes of Flight in Relation to Aeronautics. Proceedings of the Royal Institution of Great Britain, March 22nd, 1867. On the Mechanical Appliances by which Flight is attained in the Animal Kingdom. Transactions of the Linnæan Society, vol. xxvi. (read June 6th and 20th, 1867).

[4] Revue des Cours Scientifiques de la France et de l'Étranger, Feb. 13th, 1869, and subsequently.

[5] Comptes Rendus, May 16th, 1870, p. 1093.

[6] THE LANCET, Dec. 8th, 1866, p. 640.

[7] Medical Times and Gazette, Jan. 26th, 1867.

submitted to the candidates for the primary examination, and anything more beautiful and better calculated to test the accuracy of anatomical knowledge and teaching, we have never seen. The recent specimens were very well and plainly got out; but what were formerly termed "pickles" were masterpieces of workmanship—none of the miserable ancient preparations which we remember to have seen at one time, and which would take a conjuror to say what they were, far less a nervous examinee. The specimens are in many cases injected, of very brilliant colours, and the nerves, tendons, fasciæ, &c., most carefully cleaned and whitened.

Students seem to have a terrible bugbear in what is termed an "out-of-the-way section," or a "window," or a "side view," but these should be always, as far as possible, shown them by their teachers, or they should be taught more "topographically" so as to know and recognise any tissue or structure from whatever point of view shown them. It is not to be supposed that every section can be shown in the dissecting-room, but this might be done from time to time on a "class subject." The preparations to which we allude are set in moulds of plaster-of-Paris; these are sunk in flat pans and a sheet of glass over all. Indeed, the array of preparations we saw would, in our estimation, give a student courage rather than dismay him, from the plain and evident manner in which the different structures are displayed. The credit of these dissections is due to Dr. Pettigrew and Mr. Moseley.

It will be seen from the foregoing that as a matter of fact Mr. Moseley had no part either in the discovery of the liquid plaster-of-Paris method of injecting or in the mounting of the dissections in coloured liquid plaster-of-Paris run into the bottom of flat glass jars, containing spirit and covered with glass lids.

Toward the end of 1867 my eyesight becoming impaired, and my health generally failing, I resolved to resign my appointment at the Hunterian Museum. The President and Council of the Royal College of Surgeons of England point-blank refused to let me go and would not accept my resignation. They said, "We will give you a three or six months' holiday and keep your place open." I, however, felt the continuous strain inseparable from my peculiar mode of dissection, and the confinement of London were too much for me, and resigned unconditionally. The following sentence in THE LANCET [8] chronicled the event:—

> The magnificent series of dissections with which Dr. Pettigrew has enriched the College of Surgeons has been more than once noticed in these columns, and our readers, whether professed anatomists or not, must regret the suspension of the priceless labours of the "best dissector of the day," as a well-known London teacher of anatomy termed him.

Before severing my five years' connexion with the Hunterian Museum of the Royal College of Surgeons of England I wrote out a detailed account of all my hot-water and other methods of dissecting and preparation-making, my mode of injecting with liquid plaster-of-Paris and other cold materials, and my plan of mounting dissections in flat glass jars, troughs, capsules, &c., into which coloured liquid plaster-of-Paris had been run and which contained spirit and were covered with glass lids, my object being to place it in the hands of Mr. W. H. Flower, the curator, who was totally ignorant of my hot-water and other contrivances for making finished dissections. I intended the detailed account in question as an heirloom to my successors for their instruction and guidance in the difficult art of preparation-making in connexion with the higher anatomy. My assistant, William Pearson, interposed with the words, "Oh, sir, if you please, don't do that; your so doing will not benefit you and will utterly ruin my prospects of preferment at the museum." This had not occurred to me, and, as Pearson had been a good servant, I tore up the document without in the least desiring to conceal my methods then or subsequently. This happened some 33 years ago, and during the greater part of that long period William Pearson has been engaged in extending according to my methods the great series of human and comparative anatomy dissections, injections, casts, &c., which I designed and a considerable number of which I executed. This superb collection of hot-water dissections, liquid plaster-of-Paris injections, casts, &c., are, for the most part, now fittingly housed by the Royal College of Surgeons of England in a large new museum adjoining and opening into the original Hunterian Museum. The work done by William Pearson after I retired from the museum and the position now occupied by him in great measure justify my action in his favour; still I have always had it on my mind to explain the situation for the sake of a future race of anatomists. William Pearson has now had ample innings, and the time has arrived when everything should be fully and fairly explained. I did not originally, neither do I now, attach much importance to my hot-water and other methods of dissecting, injecting, &c., although I am bound to admit that their discovery involved much close and consecutive thinking and planning, and a large number of experiments extending over several years.

[8] THE LANCET, Jan. 19th, 1868, p. 97.

The present communication on anatomical dissection, injection, and preparation-making as devised and practised by me at the University of Edinburgh and at the Hunterian Museum of the Royal College of Surgeons of England would assuredly never have been written but for the importunity of friends, among whom may be mentioned Mr. Thomas Bryant, late President of the College. These friends represented to me that the methods by which such splendid results had been achieved would be lost if I did not come to the rescue. They further urged that it was due to myself to explain the situation, especially as questions had been raised as to the real author of the great series of human and comparative anatomy dissections, casts, and injections referred to. I felt that there was force in the arguments employed, and as I had no wish to conceal anything by which the fascinating studies of anatomy and physiology could be advanced I have given, as far as my recollection serves, an exact account of the circumstances under which the various forms of dissecting and injecting, making of casts, &c., practised by me were devised and carried out. The foregoing, I doubt not, will be duly endorsed by William Pearson, who still plies his avocation as dissector, injector, and preparation-maker at the Hunterian Museum of the Royal College of Surgeons of England.

Some time ago I had my attention directed to a notice in the *British Medical Journal* [9] to which it may be well if, in conclusion, I direct attention. The notice is wholly misleading, as everyone who reads this communication will readily perceive. In the notice referred to, which I quote below, Sir William H. Flower is bracketed with me as having developed the talent of William Pearson as a dissector, which is, of course, absurd. He is further credited with having directed Pearson in the preparation of the great series of human and comparative anatomy dissections (muscles, ligaments, blood-vessels, and nerves), which series, as already explained, I not only designed, but a large number of which I actually dissected with my own hands, and everyone of which has been dissected by my hot-water and other methods, these methods never having been known to Sir William Flower. I am also represented as a student inferentially learning my anatomy at the museum and the College, while in reality I was a duly qualified Doctor of Medicine of the University of Edinburgh before I went to London and before I made the acquaintance of either the museum or the College. The notice in question is as follows:—

> Amongst the duly appointed students who were termed "assistants in the museum," was Professor Bell Pettigrew, the first dissector of modern high-class permanent anatomical preparations. His work, demonstrating the muscular apparatus of the heart, stomach, and bladder, stands in the museum as a monument. Flower and Pettigrew developed the talents of the prosector to the College, Mr. Pearson, a true artist in dissection. Under the conservator's directions he prepared the fine series of spirit preparations illustrating human and comparative anatomy which is so much admired by all visitors to the museum. The late Lord Tennyson, hardly an enthusiast about modern science, remarked, when paying a visit to the museum twenty years ago, that he had never imagined how so grim a subject as anatomy could be made so beautiful.

[9] Brit. Med. Jour. (Queen's Commemoration Number), June 19th, 1897, p. 1592.

ABOUT ALKAPTONURIA.[1]

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IN a paper read before the Royal Medical and Chirurgical Society in 1899 I gave the results of the examination of the urine in five cases of alkaptonuria not previously recorded and a summary of the then state of our knowledge of this rare and interesting urinary abnormality. The object of the present communication is to call attention to certain facts and to record some observations which tend to throw fresh light upon its nature and causation.

1. THE RELATION OF ALKAPTONURIA TO CONSANGUINITY OF PARENTS.

That alkaptonuria may be met with in several members of a family was first pointed out by Kirk in 1886, and of the

[1] A paper read before the Royal Medical and Chirurgical Society on Nov. 26th, 1901.

cases since recorded a considerable number have served to emphasise this fact. However, although brothers and sisters share this peculiarity, there is, as yet, no known instance of its transmission from one generation to another, nor is anything known as to the urine of children of alkaptonuric individuals. On the other hand, I am able to bring forward evidence which seems to point, in no uncertain manner, to a very special liability of alkaptonuria to occur in the children of first cousins. The information available relates to four families, including no less than 11 alkaptonuric members, or more than a quarter of the recorded examples of the condition.

I have recently learnt that the parents of my own patient, and of an infant brother born in the present year, who also is alkaptonuric, are first cousins, their mothers being sisters. Again, in the notes which were kindly furnished to me by Dr. F. W. Pavy of a family of 14 referred to in my previous paper, of whom four were alkaptonuric, it is mentioned that in this instance also the parents were first cousins. I am also greatly indebted to Dr. Robert Kirk for kindly making inquiries from the father of the three children whose cases were so thoroughly investigated by him some years ago—inquiries which brought to light the fact that their parents also were first cousins, the children of sisters. Dr. Kirk adds that the mother is dead, that the father has married again, and that his only child by his second wife, who is not a blood relation, is not alkaptonuric. Against this may be set the fact that the parents of the patient studied by Dr. Walter Smith in 1882, and of a younger brother whose urine I examined, were not blood relations.

The children of first cousins form so small a section of the community, and the number of alkaptonuric persons is so very small, that the association in no less than three out of four families can hardly be ascribed to chance, and further evidence bearing upon this point would be of great interest. In a recent paper by Erich Meyer[3] it is mentioned that the parents of his patient were related but the exact degree of relationship is not stated. Elsewhere the literature is silent upon this matter, a silence which counts for little, seeing that the information is not usually forthcoming unless asked for, as Dr. Kirk's experience and my own show. There are some indications that the younger members of a family are more liable than the older ones. Thus the alkaptonuric members of the family observed by Dr. Pavy were the ninth, eleventh, thirteenth, and fourteenth. My own patient and his alkaptonuric brother are the fourth and fifth children, and in the family observed by Dr. Kirk, the second, third, and fourth children showed the peculiarity.

The facts here brought forward lend support to the view that alkaptonuria is what may be described as a "freak" of metabolism, a chemical abnormality more or less analogous to structural malformations. They can hardly be reconciled with the theory that it results from a special form of infection of the alimentary canal. There is here no question of the intensification of family tendencies by intermarriage, for in no instance were the parents themselves alkaptonuric, and, as has been already mentioned, there is, up to now, no recorded instance of alkaptonuria in two generations of a family.

2. The Onset of Alkaptonuria in a New-born Infant.

That alkaptonuria may persist through life without any apparent detriment to health and may date from earliest infancy has long been known, but there have hitherto been wanting observations bearing upon the exact period of its onset in congenital cases. This deficiency I am now able to supply to some extent.

The fifth child (a male) of the parents of my patient, and the second alkaptonuric member of the family, was born at 6 A.M. on March 1st, 1901. The mother was tended after her confinement by a district nurse, and both she and the nurse were fully alive to the possibility that the child might show the same peculiarity as his elder brother and were on the look-out for any indication that this was the case. The information which follows was given to me by the nurse within a few days of the infant's birth.

During the first day of life the child was put to the breast and was given a teaspoonful of butter and sugar, according to a practice common among the poorer classes. The napkins were first changed at 9 P.M. on the 1st (when the child was 15 hours old) and it was specially noted that although urine had been passed freely there was no indication whatever of the staining which was so familiar in the case of the elder child. When the napkins were next changed, at 11 A.M. on the 2nd, the nurse noticed a slight staining and at 10.30 A.M. on the 3rd (52 hours after birth), and on all subsequent occasions, the napkins were deeply stained in the characteristic manner. The child had been put to the breast during the previous night and on the morning of the 3rd the nurse found that the mother's breasts contained milk, but were not full. The mother was not conscious of the "draught" until a later hour on the 3rd. Some urine collected from the eighth to the eleventh days of life reduced Fehling's solution and had all the ordinary properties of alkapton urine. The above facts, carefully recorded by one who was wholly without bias in favour of any theory of the nature of alkaptonuria, or knowledge of the questions at issue, nevertheless agree completely with what was to be expected on theoretical grounds.

The evidence available points to tyrosin, formed as a product of pancreatic digestion, as the parent substance of the homogentisic acid which imparts to alkapton urine its peculiar properties, and we should anticipate that the peculiarity of metabolism would first manifest itself after the entry of proteid food into the alimentary canal. As, moreover, the human tissues appear to be able to destroy a certain amount of homogentisic acid, this substance would not be excreted until this destructive power was overtaxed. The observations on the new-born infant appear to be most readily explained on the assumption that the development of alkaptonuria resulted from feeding, but as the child was suckled, the exact time when food began to enter the alimentary canal cannot be fixed with any degree of certainty. When the elder child was first seen by me the mother stated that in his case her attention had been first called to the staining of the napkins on the day after his birth, thus in both instances the condition may be fairly described as congenital. In this connexion a most interesting case recently recorded by Winternitz[3] may be referred to. He had under observation a family of three alkaptonuric children, a boy aged 12 years, a girl aged 10 years, and another girl aged six years. The mother, who stated that the urine of the two elder children had stained the napkins from the first day after their birth, added that this had only been the case with the youngest child during the last year. This recalls Maguire's case in which the condition was said to have dated from the age of 27 years, the intermittent case recorded by Stange, and the still more puzzling cases of temporary alkaptonuria.

3. The Relation in Time of the Output of Homogentisic Acid to a Proteid Meal.

In a quite recent paper, which embodies many other observations of much interest, Mittelbach[4] gives the results of the estimation of the reducing power of the samples of urine passed by his patient at different periods of a day of 12 hours, which show the maximum excretion of homogentisic acid following within the first two or three hours after the chief meal, and not, as is the case with the ordinary products of metabolism, appearing in the urine in the largest quantities from five to seven hours after a meal. This result was so unexpected and seemed so difficult to reconcile with the view that tyrosin is the parent substance of homogentisic acid in these cases that further observations upon the point appeared desirable. I accordingly estimated the reducing power of the several specimens of urine passed by my patient (aged four years) during three periods of 24 hours each, and the results are embodied in the following tables. The estimations were made by Baumann's silver method, but owing to the small bulk of many of the specimens five cubic centimetres instead of 10 cubic centimetres of urine were used for each testing, and it was not attempted to secure estimations within 0·5 cubic centimetre of $\frac{N}{10}$ silver nitrate solution.

The urine of the child is always rich in homogentisic acid, and the daily output approaches that of some of the adult patients. At the age of three years the average daily excretion during seven days was 2·6 grammes of homogentisic acid, and that of Meyer's patient of about the same age was 3·24. The figures for adults vary between three and six grammes per 24 hours.

[3] Deutsches Archiv für Klinische Medicin, 1901, Band lxx., p. 443.

[3] Münchener Medicinische Wochenschrift, 1899, xlvi., p. 749.

[4] Deutsche Archivs für Klinische Medicin, Band lxxi., p. 50.

Day 1.—On this day the patient was taking the ordinary hospital diet for children of his age. The first meal was at 5 A.M.; dinner, consisting of minced meat and rice pudding, at 12 noon; tea, including an egg, at 3.45 P.M.; supper, consisting of milk and bread-and-butter, at 6 P.M.

TABLE I.

Hour of day.	Quantity of urine passed.	No. of c.c. $\frac{N}{10}$ silver nitrate solution reduced by 5 c.c. of urine.	No. of c.c. $\frac{N}{10}$ silver solution reducible by total urine.	Corresponding to a reducing power per hour of:—
A.M.	Cubic centimetres.			Cubic centimetres.
9.30	60	10·0	120·0	—
P.M.				
12.30	53	10·5	111·3	37·0
4.0	46	13·0	119·6	34·2
5.55	27	16·0	86·4	45·0
9.30	56	11·0	121·0	33·7
A.M.				
12.45	35	9·0	63·0	19·3
5.45	28	5·5	30·8	10·2
6.0	25	5·5	27·5	12·2
Totals	329	—	679·6*	—

* Corresponding to 2·79 grammes of homogentisic acid.

Here the maximum excretion per hour was between 4 P.M. and 5.55 P.M.—i.e., from four to six hours after the chief meal, but the results are somewhat obscured by the overlapping of the effects of several meals rich in proteid.

Day 2.—On this day the diet was so arranged that the articles richest in proteids were given at the chief meal, which, as before, was at 12 noon, and hourly specimens of urine were fortunately obtained from 4 P.M. to 9 P.M. inclusive. It is clearly seen that although there is a conspicuous rise in the specimen passed at 1.30 P.M. the maximum excretion was between 3 P.M. and 7 P.M.

TABLE II.

Hour of day.	Quantity of urine passed.	No. of c.c. $\frac{N}{10}$ silver nitrate solution reduced by 5 c.c. of urine.	No. of c.c. $\frac{N}{10}$ silver solution reducible by total urine.	Corresponding to a reducing power per hour of:—
A.M.	Cubic centimetres.			Cubic centimetres.
9.55	26	6·0	31·2	—
11.40	43	5·5	47·3	27·0
P.M.				
1.30	25	16·0	80·0	43·6
2.50	30	10·0	60·0	45·0
4.0	30	14·5	87·0	84·5
5.0	32	15·0	96·0	96·0
6.0	20	15·0	60·0	60·0
7.0	31	14·0	16·8	86·8
8.0	25	10·0	50·0	50·0
9.0	24	8·5	40·8	40·8
10.55	65	3·0	39·0	20·3
A.M.				
12.55	27	6·0	32·4	16·2
2.0	5	6·0 or 7·0	8·4 (?)	7·7
4.40	16	7·0	22·4	8·4
8.0	41	8·0	65·6	19·6
Totals	440	—	806·9*	—

* Corresponding to 3·327 grammes of homogentisic acid.

The total excretion of homogentisic acid was increased, owing to some increase of the proteid food, partly in the form of plasmon. The effect of the early breakfast at 5 A.M. is still clearly marked.

Day 3.—On this day the meal richest in proteid was given at 9 A.M. instead of at noon, and the maximum output of reducing substance per hour was also three hours earlier—viz., between 12.15 P.M. and 4.25 P.M. The rise during the hours immediately following the meal is again very noticeable. The total reducing power of the 24 hours' urine was on this day somewhat larger still.

TABLE III.

Hour of day.	Quantity of urine passed.	No of c.c. $\frac{N}{10}$ silver nitrate solution reduced by 5 c.c. of urine.	No. of c.c. $\frac{N}{10}$ silver solution reducible by total urine.	Corresponding to a reducing power per hour of:—
A.M.	Cubic centimetres.			Cubic centimetres.
6.0	32	6·0	38·4	—
8.0	30	(?)	(?)	—
9.25	26	5·0	26·0	18·3
11.15	46	8·0	73·6	40·1
P.M.				
12.15	29	9·0	52·2	52·2
4.25	99	14·0	177·2	68·5
6.0	46	8·5	78·2	49·3
9.20	95	6·5	123·5	35·3
11.45	31	7·5	46·5	20·6
A.M.				
2.50	35	6·0	42·0	13·6
4.45	41	4·5	36·9	19·2
Total	510	—	—	—

It will be at once apparent that these results do not bear out Mittelbach's observation that the reducing power of the urine reaches its maximum within two or three hours of a proteid meal, but show, on the other hand, that in the case of my patient, although such a meal is quickly followed by a much increased excretion of homogentisic acid, a still larger amount is excreted during the second period of four hours than during the four hours immediately following the meal. In a word, they tend to support the view that the change from tyrosin to homogentisic acid takes place in the tissues after the absorption of the former, rather than the alternative view that the change in question is brought about in the alimentary canal.

Chandos-street, W.

A CASE OF "MYXASTHENIA," WITH REMARKS ON KINDRED AFFECTIONS.

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THE patient was a woman, aged 44 years. As regards her family history, her father had died from heart disease with dropsy at the age of 65 years. There was no history of gout in his case, but he had been a great sufferer from dyspepsia with excessive flatulence. Her mother died early from chronic phthisis. The patient's individual history was as follows. She had been in a feeble and unsatisfactory state of health for the previous 20 years. As a child she had had diphtheria and a severe attack of pertussis. She was considered a delicate and anæmic girl. After her first confinement, at the age of 24 years, she suffered from descent of the womb with ulceration of the neck and was kept on her back for weeks together. At one time she had an attack of acute gastritis when even small quantities of liquid were not retained. The late Sir Andrew Clark, who regarded the condition as due to a vicious state of the mucous membranes, recommended small solid meals, and she commenced to improve. Of late years she had consulted several eminent medical men. One of these physicians, probably assuming the presence of a gouty diathesis, advised the Salisbury regimen of beef cakes and hot water, which she faithfully followed for 12 months with no obvious advantage. Another suggested massage and over-feeding, but this did not improve matters. It may not have been thoroughly carried out.

On examination the patient was found to be a tall woman, with light brown hair, pale blue and tired-looking eyes, and a blonde and fairly healthy complexion. She complained of dryness of the tongue and throat, of pains after food, and of a disinclination to eat on account of flatulence. The parched feeling in the throat often rendered her sleep disturbed and unrefreshing. The tongue was red, dry, glazed looking, and much fissured transversely. The cavity of the pharynx appeared to be large. On opening the mouth the palate was seen to be drawn up high, giving a complete view without depressing the tongue. The tonsils were small. The whole of the mucous membrane was dry, pale, and shiny. There were several streaks much paler than the rest, which, the patient said, became pink towards night. Immediately below the left tonsil there were two small granulations, each of about the size of a pea, which had given her much trouble. They swelled at times and caused pricking pains below the angle of the jaw. There were several sensitive papillæ at the root of the tongue. She had declined treatment by the galvano-cautery. There were no varicose veins. The gastric pain came on about two hours after food and was at its worst at midnight. At that time it shot through the body to the back and was only relieved by the eructation of wind. She complained of rheumatic pains during the night in the elbows and wrists. During the day she suffered from heartburn. Meat was followed by less pain than milk. The bowels were always confined and the motions were difficult, hard, and lumpy; it was often necessary to use an injection. The urine was normal. To allay the pain in the pharynx menthol spray had been employed. For the dryness of the mouth, which was worse at night, she had found effervescing tabloids of belladonna and cubebs very useful. Powders of bismuth and soda had prevented the gastric pain and sulphate of soda combined with carbonate relieved the constipation. I prescribed compound tabloids of mucin (mucin with sodium bicarbonate), two to be taken before and two after a meal, the throat to be swabbed or painted at bedtime with a solution prepared by dissolving one tabloid of mucin containing menthol in a wineglassful of warm lime-water[1] and the powders of bismuth and sodium sulphate to be continued.

The term "myxasthenia."—The condition forcibly reminds one of the class of cases described by Mr. Stuart-Low[2] under the names of "desiccation," "irritation," and "ulceration of the mucous membranes." Since no designation has hitherto been proposed to describe this constitutional defect, I venture to suggest that of "myxasthenia," which has the advantage of bringing into line with it the closely allied but somewhat undefined condition of neurasthenia. A more correct term would be *myxanadenia* (a, not, and *ἀδήν*, a gland), but this is an awkward word. The myxasthenic state would consequently imply atrophic changes in the mucous or goblet-celled epithelium.

Muciparous glands and mucin.—Mr. Stuart-Low[3] describes the situation of these glands in the nasal, buccal, and pharyngeal cavities. He asserts that they are so numerous and productive that one must conclude a proportion of the mucus is utilised, after swallowing, for the protection of the pyloric region of the stomach, which, in the sitting and standing postures, becomes the most dependent part of that organ. The mucous membrane of the small intestine contains cells with striped free borders, but goblet cells are few and far between. Its function must therefore be largely absorptive in character. The large intestine, again, contains vast numbers of goblet cells secreting a plentiful supply of mucus, which is used for protective and lubricating purposes. The respiratory tract is normally covered with a thin stratum of mucus, also derived from goblet cells. The latter must be distributed throughout the respiratory tract, certainly as far as the finer ramifications of the bronchi. Mucin itself may be manufactured[4] from the salivary glands and the sinews of the leg of the ox, also from ox-bile. The addition of chloride of sodium renders it more tenacious, a fact of some significance with regard to the precipitation of biurates in synovial fluids. The molecule appears to be complex, as under certain circumstances it splits up into a carbohydrate and a nucleo-albumin.[5]

The nerves of mucous membranes.—The vital importance of a normal supply of mucus for the general requirements of the body and the particular necessities of mucous membranes is not sufficiently realised.[6] In fishes, where a thin layer of cutaneous and protective mucus is an urgent need, the secretion of this material is largely dependent upon the integrity of the vagus nerve. The latter supplies the length of the lateral line, a structure which is an important mucus-secreting organ. We are ignorant of the exact part which nerve influences play in the production of mucus in the higher animals. The vagus and sympathetic supply the pharyngeal, gastric, and small intestinal areas. It is possible that the vagus likewise sends twigs to the large bowel by way of the solar plexuses, since several physiologists affirm that stimulation of the nerve elicits movements of this part of the bowel as well as of the small intestine. A diminished or an increased secretion of mucus may be determined by trophic or irritative degenerations (neuroses) occurring within the vagal centres or at points intermediate along the course of the nerves between the central nervous system and the terminals within the mucous membranes.

Necessity of a nomenclature.—It seems advisable to adopt a series of new names in order to fix our ideas more definitely and to serve as a guide for future investigations. At the present time, however, we are able to refer to a few general varieties only, which new facts may considerably extend and amplify. We can conceive of quantitative mucous changes in the direction of excess and of diminution, also of a condition where there is a more profound and qualitative alteration in which the secretion may contain little mucin, but a large proportion of some other material such as nucleo-albumin or fat. The term "orthomyxia" may be used to express a perfectly sound and healthy state of the mucous secretion. Quantitative changes may be termed "metamyxia," and we may refer to them as a "metamucous" state. "Metamucous" is more mobile and acceptable than "metamyxic." Where the change is in excess the terms "hypermyxia" and "hypermucous" would be suitable, and would contrast with the converse condition, which would be "hypomyxia" and "hypomucous." When there is a profound allotropic (excessive viscidity) or a qualitative modification, the terms "paramyxia" and "paramucous" would be applicable. Under this division may be included the production of extremely viscid mucus, or of membranes, such as occurs in glairy or membranous enteritis and the like.[7]

Application of the terminology.—Among bronchial affections whooping-cough is remarkable. In this disease the whole of the bronchial mucous membrane appears to be involved, and it is often accompanied by similar changes in the naso-pharyngeal, gastric, and colic areas. There may be increased production of mucus throughout these regions Pertussis probably arises from an irritation (originating from the presence of toxins produced by the growth and multiplication of a specific bacillus) which implicates, in addition to cortical and emotional centres, the medullary origin and the peripheral terminations of the vagus. It is therefore a state of general hypermyxia with, as subdivisions, hypermyxia naso-pharyngea, hypermyxia bronchialis, hypermyxia gastrica, and hypermyxia colica. The presence of the excessive amount of mucus within the naso-pharynx, the bronchi, and the stomach is one of the factors which excites the paroxysms of cough and vomiting,[8] and the occasionally brilliant results of naso-pharyngeal douching and spraying,[9] of emetics and laxatives,[10] become comprehensible. Hypermyxia colica has been already described as "mucous disease of the bowels" by Dr. Eustace Smith. It is quite possible that a hypomucous or paramucous condition may sometimes follow, due either to exhaustion or to a disordered activity of nerve influences, which may prove the starting-point of atropic rhinitis, pharyngitis, gastritis, or asthma. A paramucous variety probably exists in some

[1] Mr. W. Stuart-Low: Mucin in Desiccation, Irritation, and Ulceration of Mucous Membranes, THE LANCET, Oct. 12th, 1901, p. 972.

[2] Loc. cit. [3] Loc. cit.

[4] Burdon-Sanderson: Handbook to the Physiological Laboratory, p. 444.

[5] For further details consult Mr. Stuart-Low's paper.

[6] "Myxotic," as a general term, might be used to correspond with neurotic.

[7] All conditions with exudations consisting of fibrin are excluded.

[8] The virus may also affect the medullary *centres* of cough and vomiting and the rima.

[9] Syringing of the external auditory meatus can act only in the way of reflex inhibition.

[10] With regard to laxatives these are certainly indicated where there seems to be an excess of gastric mucus. I have found of the greatest value a prescription containing liquor bismuthi, combined with minimal doses of the tinctures of podophyllin, jalap, rhubarb, with cocaine, carbolic acid, and aromatic cascara, taken four times a day, no free purgation being allowed. In this connexion Dr. Eustace Smith (Allbutt's System of Medicine, vol. ii., p. 243) remarks that an acute watery diarrhœa may suppress all laryngeal and pulmonary symptoms. It looks as if the virus (or its toxins) was manufactured chiefly within the bowel, or had selected as its habitat the portal circulation.

forms of the rare affection known as "plastic bronchitis." The plugs are quite soluble in lime-water (Wilson Fox). According to the old theory of Beau[11] asthma is a bronchial catarrh "with a highly viscid sputum the dislodgment of which into the larger tubes terminates the attack"; in other words, it is probably in some instances a paramucous condition dependent upon trophic or irritative changes occurring in the pulmonary vagus or its centre. As an example of the hypomucous variety may be mentioned dry bronchitis of the gouty diathesis (?). Naso-pharyngeal conditions of hypomyxia are seen in atrophic rhinitis and pharyngitis sicca. I have just referred to hypermyxia naso-pharyngea. Paramucous conditions do not appear to occur. The affection of the stomach represented by the term "desiccation of mucous membranes"[12] corresponds to hypomyxia gastrica. It might also be termed "myxanadenia," "myxatrophia," or "myxasthenia gastrica." Such a condition is the forerunner of gastric pain and dyspepsia, erosions, and ulceration. Some varieties of irritative gastritis, witness that associated with pertussis, and some forms of chronic gastritis, may be pure examples of hypermyxia gastrica. The problematical occurrence of membranous gastritis serves to illustrate the term "paramyxia gastrica." With regard to the large bowel conditions of metamyxia in the direction of excess occur as already stated in the disease called "mucous disease of the bowel." Under this terminology it would be classified as "hypermyxia colica."[13] The converse condition is seen in many obstinate cases of constipation, due without doubt to a diminished production of mucin and probably to a myxatrophic condition of the lining membrane of the colon. I could name it "hypomyxia colica." The disease known as "glairy enteritis," "membranous enteritis," or "catarrhal enteritis," in which the membranes consist of inspissated mucus, of nucleo-albumin, or even of fat, is obviously a paramucous condition—namely, "paramyxia colica." Trophic or irritative degenerations of the vagus may play a part in its origin.

Relations to gout, diabetes, and cholelith-iasis.—Abnormal dryness of mucous membranes may occasionally be an accompaniment of the gouty and diabetic diatheses. The entire pathology of gout is not exhausted in the idea of uric acid, nor is that of diabetes altogether embodied in that of sugar, since we know that these two substances are merely the outward manifestations of a profound disturbance of metabolic activity the elucidation of which is still reserved. The presence of mucin in abundance within the synovial fluid where uric acid deposits most frequently occur, the existence of a carbohydrate moiety in the mucin molecule, and the diminution of saliva and desiccated tongue of diabetic patients are suggestive facts which may lead to the discovery of interesting relationships.

Clacton-on-Sea.

CARCINOMA MAMMÆ: ON THE NECESSITY FOR TAKING STEPS DURING THE OPERATION FOR REMOVAL TO OBVIATE THE RISK OF SUBSEQUENT DISSEMINATION.

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IN this paper I wish to call attention to a subject which I believe to be important—viz., the necessity of occluding as far as possible the emergent lymphatics and veins of the breast when operating for cancer of that organ. During the last few years new operations, of which I need only mention Halsted's, have been devised whereby we remove in a much more thorough and systematic manner than formerly any structures which we think may possibly be invaded by the growth. In spite, however, of the advances which have been made three facts remain. In the first place, it must be admitted that, no matter how careful the surgeon may be, the mere fact of his operating in the neighbourhood of a malignant growth renders infection of some part of the wound at least possible; secondly, that though the surgeon may be morally certain that he has removed wide of the disease he cannot be absolutely so. In the third place, during the operation innumerable lymphatics and small veins are cut across. Without in any way meaning to imply that infection of the wound is a usual occurrence or that some part of the growth is invariably left behind, I do maintain that the possible risk of dissemination which may result from either of these contingencies taking place should always be borne in mind and as far as possible provided against at the time of the first operation. I believe that the chance of subsequent dissemination taking place may be much lessened, if not entirely prevented, by occluding the mouths of those lymphatics and veins which drain the mamma and which have necessarily been cut through during removal of the organ. I need only mention two cases to show that after operations for removal of the breast extensive dissemination may occur.

CASE 1.—A woman, aged 42 years, was admitted into the Cancer Hospital, Brompton, S.W. Three years previously she had noticed a lump in her left breast. This had grown and had eventually reached "the size of a child's head." The breast was removed in the country. The wound healed but always looked like "a scald." Two and a half years after the operation the whole of the left side began to get hard and the hardening process spread to the other breast which eventually completely disappeared. Small lumps of the size of a hempseed now began to appear on the skin on the right side and in the lower part of the abdomen. The patient lost the sight of her left eye and small lumps in the scalp now made their appearance. On admission the condition was as follows: the skin over the operation wound on the left side and that over the site of the right breast was tense, shiny, and hide-bound. There were seven little nodules over her right and three over the left temple, three in the middle line of the scalp, two in the right posterior triangle of the neck, two in the skin over the right supra-spinous fossa, two in a similar position on the left, three over the lower ribs on the right side, and one over the acromial end of the spine of the left scapula. 22 nodules were counted scattered over the abdomen. The inguinal glands on both sides were enlarged. In all, nearly 60 of these little nodules were present. There was atrophy of the left optic disc and ptosis, sometimes more sometimes less marked, of the left eyelid. Originally there were numerous nodules situated in the skin over the left scapula, but these had become replaced by the brawny hardness. The diagnosis I made of the condition was cancer en cuirasse, associated with multiple carcinomatosis of the skin and possibly of internal organs as well. The point, however, which I wish to bring out is this: that here we have a case of dissemination coming on after an operation. I look upon this case as one of infection by the blood-stream and I think infection took place at the time of operation.

The next case is a remarkable one and has been recorded by Dr. J. Ritchie and Dr. J. Purves Stewart.[1]

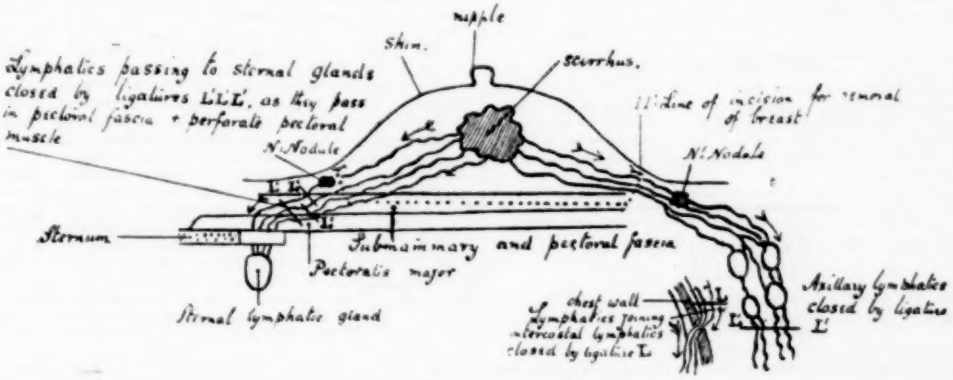
CASE 2.—A breast which was affected with scirrhus was removed with some of the axillary lymphatic glands from a woman, aged 47 years. Five years and eight months afterwards she had a severe attack of pain in the back and limbs. Nine years and three months after the operation she died from secondary carcinoma of the bones. This was proved microscopically. As Dr. Ritchie and Dr. Stewart state, the case is remarkable for the great length of time which elapsed between the operation and the first evidence of bone infection—namely, five years and eight months.

These and many other similar cases which might be quoted show conclusively that after operations general dissemination, occurring either early or late, is by no means of rare occurrence. This is not to be wondered at when, in view of the two contingencies mentioned above actually occurring, it is remembered that no steps whatever are taken to prevent it during the operation. Before, however, discussing the means which I would advocate it may be well to indicate in the briefest manner possible the most important routes taken by the lymphatic vessels and veins which run from and drain the mamma. 1. The

[11] Auld: The Pathology of Bronchial Affections, p. 86.
[12] Stuart-Low: loc. cit.
[13] The frequent occurrence of mucous degenerations of the bowel in the insane (asylum dysentery) where extensive trophic and degenerative lesions in the nerves and nerve-centres co-exist, is worthy of note (Dr. T. Claye Shaw, Brit. Med. Jour., Oct. 26th, 1901). The croupo-fibrinous exudations and deposits which occur in tropical dysentery do not concern us, since they are obviously due to severe inflammatory processes involving both mucosa and submucosa.

[1] Transactions of the Edinburgh Medico-Chirurgical Society.

lymphatics from the inner side of the breast accompany the perforating veins of the internal mammary; the emerging trunks run in the submammary and pectoral fascia, perforate the pectoralis major, and terminate in the sternal glands, the largest and most important of which are situated in the first, second, and third interspaces. In cases of carcinoma involving the inner portion of the breast these glands may be found affected. The gland in the second space may become so large that it may press upon and actually ulcerate into the left vena innominata or into the junction of the right and left vena innominata. 2. The greater number of lymphatics from the breast pass into a group of glands situated in the axillary fascia, thence the emerging trunks pass to a few small glands under the pectoralis minor muscle, and then make their way to a few glands situated immediately below the clavicle, whence they join glands in the subclavian triangle. The lymphatic vessels and glands in the axilla are imbedded in the axillary fascia and in a process of fascia, sometimes called the "suspensory ligament," which is part of a system known as the "clavipectoral fascia." The lymphatics in 1 and 2 are the most important and drain the greater part of the mamma. 3. The lymphatic glands underneath the pectoralis minor and a few small glands under the clavicle probably receive mammary lymphatics which pass through the substance of the pectoralis major. 4. The lymphatics which lie over the serratus magnus follow the course of the intercostal veins. They are not, strictly speaking, lymphatics of the mamma, but in cases where the axilla is much involved by the growth extension may take place along this route, or if the axilla is cleared out infection may take place at this spot. 5. In a certain number of cases of carcinoma mammæ it is found that the liver is the seat of secondary deposits. The exact path taken under these circumstances has not been accurately determined. When a breast is amputated and the axilla, we will say, cleared out innumerable lymphatics and vessels are cut across. What is the result? Here are these lymphatics ready with their open mouths to convey any malignant cells which may have been left behind or with which they may have been infected up to the superior mediastinum, *viâ* the neck, or to the anterior and posterior mediastinum by the sternal or intercostal route. Not only this, but the veins being cut across at the same time an easier and certainly more rapid route is at once opened up. No circumstances more favourable to general dissemination than this double route can well be imagined.


nipple
Skin.
Scirrhus.
Lymphatics passing to sternal glands closed by ligatures L L L', as they pass in pectoral fascia + perforate pectoral muscle
N. Nodule
I I' Line of incision for removal of breast
N' Nodule
Sternum
Submammary and pectoral fascia
Pectoralis major
Sternal lymphatic gland
chest wall
Lymphatics joining intercostal lymphatics closed by ligature L
Axillary lymphatics closed by ligature L'

It has already been pointed out that the sternal lymphatics run in the sub-mammary and pectoral fascia before perforating the pectoralis major. The axillary lymphatics run in the axillary fascia and suspensory ligament. Roughly speaking, the lymphatics may be said to accompany the veins. Now, from their size and number it would obviously be impossible to occlude either the small veins or lymphatics separately. My suggestion is to effect their occlusion by strangling by a series of ligatures the fascia in which they run. This is done in the following way. A case of carcinoma has to be operated on where the growth has not yet, let us imagine, involved the pectoralis major but where the axillary glands are felt to be slightly enlarged—the patient is not strong enough to be able to stand the shock, such as is produced by a Halsted's operation. Two or three differently curved pedicle needles should be handy. After the incisions round the breast have been made the skin is separated upwards and downwards. When the submammary and pectoral fasciæ are exposed pedicle needles armed with stoutish silk are passed through them, keeping as near as possible to the thoracic wall. On drawing each ligature tight the portion of mamma immediately lying over the strangled portion of fascia may be detached. The breast should not be removed until the fascia lying underneath has been ligatured. It is especially necessary to put ligatures at the upper and inner part of the submammary fascia, for in this way the majority of lymphatics and veins passing to the first, second, and third intercostal spaces will be occluded. As an additional precaution, especially if the case is a more advanced one, it is advisable to put two ligatures through the substance of the pectoralis major, one above the other and about one inch apart, at right angles to the course of these same lymphatics. In this way they, together with the veins passing from the breast to the anterior mediastinum, are occluded. When dealing with the axilla the axillary fascia should be well exposed and before it is cut away it should be ligatured, especially at the following places: (1) just to the inner side of the axillary vein; (2) as high up underneath the pectoralis minor as possible; and (3) where it becomes continuous with the fascia covering the serratus magnus. By ligaturing the fascia in the latter place we occlude those vessels which, running with the lateral cutaneous branches of the intercostal veins, pass on to the posterior mediastinum. In the figure, where the sternal, axillary, and intercostal lymphatics only are represented, and that in a purely diagrammatic manner, we will imagine that the breast has been removed through the incision I I' (the dotted line in the diagram); that a nodule of growth N has been left behind, or that the wound has been infected at this spot. If no steps have been taken to occlude the lymphatic vessels it is clear that this nodule will be quite free to extend itself in the direction of the sternal glands; if, on the other hand, these vessels have been occluded by passing two ligatures through the pectoralis major higher up (L'L'L' in diagram) at right angles to their course (and this can usually be done by pulling the skin to its most upward limit without the necessity of making a fresh incision) it is clear that extension in this dangerous direction would be prevented. Similarly if a nodule N' in the diagram is left in the axilla, or the wound in the axilla is infected at this point, extension up the neck is prevented by ligatures placed at right angles to that portion of the suspensory ligament running upwards underneath the pectoralis minor L' L' in the diagram. In the same way, by referring to the diagram, it will be seen that if the intercostal lymphatics are ligatured in the same manner the nodule cannot extend into the thorax laterally. This method of occluding lymphatics and veins can also be carried out in the more extensive operations such as Halsted's, but in these cases, of course, they will be occluded at places nearer to where they join the vessels of the neck and thorax. In considering the advisability of performing such extensive operations as Halsted's quite apart from the question of shock, to which a great deal of attention should be given, it must be remembered that the

larger the wound made in the operation the greater the surface over which infection may take place. If, however, the method here advocated is followed I do not believe that the last objection should be such a serious one. I have now used this method of occluding lymphatics and veins with a view of reducing to a minimum the subsequent dissemination in six cases. In five of these the presence of the ligatures in no way interfered with the healing of the wound or gave rise to any increased pain; in the sixth case, however, I must admit that I think that they were the cause of some suppuration and sloughing which were noticed in the wound on the seventh day; but even here, where the operation was an extensive one, the suppuration only lasted two days and I do not think the healing of the wound was retarded. One possible objection to their employment is that the operation is made a trifle longer. I sometimes use as many as from 10 to 15 ligatures. From what I have seen of the after-effects of vaginal hysterectomy for carcinoma of the cervix I believe general dissemination to be infinitely more rare in such cases than it is after breast operations. I cannot help thinking that the chief reason for this is that when hysterectomy is performed, prior to the actual cutting away of the uterus the broad ligaments are clamped and tied on either side, thus effectually occluding the chief lymphatics and veins coming from this organ and in this way minimising the risk of dissemination.

In conclusion I would state my belief that a "recurrent" nodule found in the neighbourhood of a scar after operation is not a very important thing in itself, but it is a most serious thing if the avenues along which it may extend have not previously been occluded, and I would again urge the importance of taking steps at the time of the first operation to prevent subsequent dissemination. Even if the method here suggested should not commend itself to those who may read this article I hope that the principle on which it is based may become more widely recognised and its importance more generally admitted.

Wimpole-street, W.

A CASE OF LEAD-POISONING CAUSING INSANITY.

BY W. STEWART STALKER, M.B., CH.B. GLASG.,
ASSISTANT MEDICAL OFFICER, SURREY COUNTY LUNATIC ASYLUM, BROOKWOOD, WOKING.

SIR W. GOWERS'S address on the Metallic Poisons has opened up a subject to which more attention might be paid—i.e., the nervous phenomena accompanying certain toxic conditions—and in giving the following history of a case of lead-poisoning in which certain nervous symptoms were marked it is in the hope that it may be of interest and prove a help in the diagnosis of such cases, which too often are mistaken for other conditions. The case was one of peculiar interest, because the onset of the symptoms was so sudden that the disease was at first regarded as one of the acute specific fevers and for a time remained undiagnosed.

The patient, a plumber, aged 30 years, was admitted into the Surrey County Asylum on August 17th, 1901. For the history of the case previously to admission I am indebted to the patient's wife and I cannot be certain of its complete accuracy, but it is to the effect that on April 12th, 1901, the patient returned from work feeling chilly and having "pains all over him." By night time he was delirious and a medical man was called in on the following day who regarded the case as one of influenza and treated it accordingly. As the patient got worse a few days later another medical opinion was procured and this led to the disease being certified as typhoid fever and he was removed to an isolation hospital. After three weeks of isolation it was recognised that he was not suffering from typhoid fever and he was sent home, remaining there until his admission to the asylum. From the outset the mental symptoms were marked and the certificate on which he was admitted to the asylum stated that he suffered from delusions of persecution with hallucinations of sight and hearing. During all this period he had been wasting in a marked degree, and his condition on admission to the asylum was as follows. He was suffering from acute mania, being restless, noisy, and excited, and utterly incoherent. His mental state, in fact, very much simulated alcoholic mania. He was very emaciated, certain muscles and groups of muscles being picked out. There was marked paralysis of his extensor muscles of the forearms and wrist-drop was very pronounced. He was unable to stand, and when held in the upright position his legs gave way under him and he tended to drop in a sitting posture. There was very evident tremor and this was most noticeable when he attempted any movement. There was no very marked increase in the knee-jerks and ankle clonus was absent. Anæmia was very pronounced and the face was wrinkled. On the gums there was an exceedingly well-defined blue line. The pulse was very slow and the arteries were rigid. No examination of the eyes could be made at this time as the patient was so restless, but later it was ascertained that there was a certain amount of optic atrophy.

Treatment was at once commenced, large doses of the bromide and iodide of potassium being given. As he refused everything in the way of food and drugs he had to be fed, and after a certain time there was evidence of gastric irritation, and raw beef-extract in small quantities was given every hour instead of the larger quantity of milk and beef-tea with which he was fed less frequently. The immediate result of the bromide was a slight abatement in the delirium, but the sleeplessness continued and the patient was getting much weaker. On the 23rd—that is, six days after admission—stimulants were resorted to as there were symptoms of collapse and the bromide was discontinued. On the morning of the 25th the patient was nearly comatose and I was just on the point of giving him some strychnine hypodermically when, to my surprise, he had a well-marked epileptiform seizure and throughout the course of the day he had two others. That night he slept and in the morning he was decidedly better. From this time onward improvement was uninterrupted, perhaps the most remarkable feature being the extraordinary rapidity of the improvement in his mental condition. There were no more epileptiform seizures, and I ascertained that there was no previous history of epilepsy. He remained in the asylum until Oct. 11th, on which day he was discharged. His condition then was as follows. He had greatly increased in weight and the atrophic and paralytic condition in the muscles was fast disappearing and he could write fairly legibly. Mentally he was well, but there was a certain amount of deafness. The vision was somewhat impaired. There was also evidently a certain degree of cirrhotic change in the kidney, as there was an excessive amount of pale-coloured urine of a low specific gravity passed daily.

The history derived from the patient himself after his recovery did not add much to that gained from his wife. Colic had never been marked, although at various times previously to the onset of his illness he had had abdominal pains of the nature of cramp. He had been an abstainer and had never had syphilis. His memory was a complete blank from the time that he became ill until the day after he had the epileptic fits.

That this was a case of lead-poisoning there can be no doubt, and the only deviation from an ordinary case of lead encephalopathy with epilepsy was the suddenness and acute mode of the onset. Had there been any history of alcoholism the symptoms would in all probability have been attributed to that habit and the real cause perhaps overlooked. That the acute onset was the manifestation of another malady and that during the course of this malady the symptoms of lead-poisoning became apparent are quite possible; but is it not reasonable to think that with such evident symptoms of lead toxæmia in the later stages of the illness the initial symptoms were the result of the lead also?

Brookwood.

INFORMALITY IN A DEATH CERTIFICATE.—In the November number of the *Maryland Medical Journal* it is stated that not long ago, while the United States ship of war *Chicago* was lying off Netley, near Southampton, England, a sailor died from an accident and a funeral at Southampton Cemetery was planned with full naval honours. The registrar, however, refused to issue a permit on the American surgeon's death certificate on the ground that the latter, not being a registered medical practitioner, was not qualified to certify the death. Application was then made to the coroner, who could not hold an inquest unless the body was landed. The funeral on shore had to be abandoned and the body was a few hours later committed to the sea beyond the three-mile limit.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF LARYNGEAL GROWTH WITH THYROTOMY.

BY W. H. KELSON, M.D. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE LONDON THROAT HOSPITAL.

THE following case seems to be of interest from the fact of its long duration.

A man, aged 49 years, came to the London Throat Hospital in August, 1901, complaining of difficulty in breathing and loss of voice. He stated that as a lad he was husky, but he quite lost his voice about 1869, when he went to Golden-square Throat Hospital and became a patient there under the care of the late Sir Morell Mackenzie. Small portions of growth were at this time repeatedly removed from the left cord. This continued for about a year, when his voice being a little improved and feeling somewhat tired he suddenly ceased to attend and avoided all active laryngeal treatment for 31 years. During this period he had always had great huskiness and more or less difficulty in breathing. He said that during the last few months he had lost about two stones in weight and his breathing had become much worse. He was a spare man of somewhat cyanotic appearance; his voice was a hoarse whisper and there was stridor directly he exerted himself. There was no history of syphilis in himself or tubercle or malignant disease in the family. On examination of the larynx the left arytenoid was seen to be motionless and the upper orifice of the larynx was almost blocked by a warty growth. The left vocal cord could not be seen; the right was normal. The exact point of origin of the growth from the left side could not be determined; it felt hard to the finger and forceps. No ulceration could be seen and what little discharge there was contained no tubercle bacilli. Considering the rapid loss in weight and increase in symptoms the last few months the question arose as to whether malignant disease was now present. Mr. E. B. Waggett, who kindly saw the case, thought that it was a simple tumour of some kind and the pathological report on a piece removed was, "A papillary growth probably not malignant." A week after admission to hospital the patient's breathing one afternoon became very much worse, and as asphyxia appeared imminent I had to perform tracheotomy rapidly. A few days after this I introduced a Hahn's cannula and, assisted by Mr. Waggett, performed the operation of laryngo-fissure, when the growth was seen to be a large single papilloma (of the size of half a walnut and weighing 30 grains) arising from the left cord; there was not the slightest sign of infiltration. The growth was removed and the larynx was closed. The patient has now a very fair voice and has resumed his occupation as cabman. The question of recurrence is of course as yet in abeyance.

Old Burlington-street, W.

TREATMENT OF WHOOPING-COUGH BY NASAL IRRIGATION.

BY EDWARD MAGENNIS, M.D. R.U.I., D.P.H. R.C.S.I.

FORMERLY the treatment of whooping-cough was most unsatisfactory, but now I think it may be hoped that a method has been found of combating and conquering this serious and distressing disease. I have for a long time been of opinion that the origin of this complaint was located in the Schneiderian membrane and this belief has been strengthened by the report of a case published by Dr. E. M. Payne in a medical journal some weeks ago. Acting on this hypothesis I have recently treated two cases, a girl, aged two years and three months, and her brother, aged 10 months, by irrigation of the nares with warm carbolic lotion. There can be little doubt that the disease is produced by a specific organism, as Afanassjew discovered large numbers of bacilli in the sputum in this disease, and Hewlett in his Manual of Bacteriology says: "Koplik, by sowing the pellets on solidified hydrocele fluid, obtained a pure culture of a small and delicate bacillus measuring 0·8 to 1·7 μ in length." The bacilli being found in the sputum could be accounted for by the escape of mucus by the posterior nares or by the extension of the disease from the Schneiderian membrane to the pharyngeal or laryngeal membranes. The strength of the lotion which I used was 1 in 40 with a little glycerine added. I procured a two-ounce syringe with an indiarubber nozzle, so that when it was in the nares it could not do any harm, no matter how the child struggled. Three syringefuls were injected into each nostril three times a day. I had only once to show the mother how to use the syringe and afterwards she and the nurse had very little trouble in using it. It is a good plan to bind down the arms with a towel or binder before using the syringe. The result of detailed daily notes of the paroxysms and amount of cough tended to prove in both cases that treatment directed to the Schneiderian membrane by thorough irrigation diminished the frequency of the paroxysms and cough and greatly reduced the duration of the disease. Of course, in this mode of treatment there is a risk of some of the fluid getting into the Eustachian tube.

Dublin.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WEST LONDON HOSPITAL.

A CASE OF TETANUS NEONATORUM.

(Under the care of Mr. W. MCADAM ECCLES.)

AT present it cannot be doubted that practically all cases of tetanus neonatorum are the result of infection with the tetanus bacillus, and this is especially true if the disease is epidemic; but it is possible that some of the cases which have been thus named are examples of convulsions the result of cerebral injury at birth; at least, this has been the opinion of careful observers, such as Marion Sims, and certainly in some cases injury at the base of the brain can be found. However this may be, the vast majority of the cases are examples of true tetanus. The case recorded below is of great interest in that the antitoxin was employed and the successful result is noteworthy. For the notes of the case we are indebted to Dr. J. John Abramston.

An infant, aged 14 days, was admitted to the West London Hospital on July 29th, 1901, under the care of Mr. McAdam Eccles. The mother stated that up to the previous Tuesday (July 23rd) the child was breast-fed; after that he refused the breast and took food by tea-spoonfuls. He passed urine freely the first week after birth, but since then he had done so with difficulty. His bowels had been confined for two days previously to admission. He was brought to the hospital because the mother found suddenly that she could not get the child's mouth open to feed him, and that he was seized by "fits" every time he was touched.

After admission the child was found to have a fit eight times within an hour. Between the fits the abdomen was very rigid, as were also the muscles at the back of the neck and the muscles of expression. The legs and arms were not so much involved but were more rigid than normal. The pulse was 120 and the respirations were 90. The temperature on admission was 98°F. Each fit started with a cry, the abdomen became as hard as a board, the legs and arms were drawn up into the fœtal position, and the hands were clenched so firmly that a finger placed in the child's palm previously to the attack was gripped so that the whole body could be lifted *en masse* by it. When the open palm was placed under the child's heels the body could be lifted from the bed in one piece until he stood on his head. The face and forehead were puckered into a painful grin, respiration

stopped, and the whole body became cyanotic. Each fit lasted for about 10 seconds; then the face lost its grin, the child became of a better colour, the sterno-mastoids relaxed somewhat, and the arms could be moved from the shoulder and slightly from the elbow. The legs did not get so relaxed but the orthotonos disappeared.

The seat of the trouble was a septic and pervious umbilicus. But in addition there was severe ophthalmia neonatorum. The umbilicus was curetted and dressed antiseptically under chloroform and the ophthalmia was treated with silver nitrate (two grains to one ounce). An attempt, however, to grow the tetanus bacillus from the umbilical pus was not successful. Three cubic centimetres of anti-tetanic serum were injected every four hours and the child was fed by the rectum during the first day, as every attempt to pass the nasal tube brought on a very severe fit. Two grains of bromide of potassium and one minim of liquor morphinæ hydrochloridi were added to each four-hourly feed.

On July 30th the temperature had been rising steadily since admission, reaching 103·2° at 2 A.M. on the morning of the 31st. Fits occurred every five minutes. The patient was fed by the nasal tube under chloroform. 18 cubic centimetres of anti-tetanic serum were injected during the day (three cubic centimetres every four hours). On the 31st a pink rash due to the antitoxin came out all over the body. The child seemed better, however, as the respirations were not so hurried, the fits were less frequent, and the rigidity between the attacks was not so well marked. The temperature, however, had been going up, reaching 106° at 2 A.M. on the morning of August 1st—the highest point reached during the acute stage. He was fed by the nasal tube without anæsthetic, though each time an attack was brought on. 18 cubic centimetres of serum were injected during the day. On August 1st the temperature had fallen to 99° during the night. The fingers could be moved slightly and trismus was not so constant. On the 2nd the patient was fed by the stomach-tube. On the 3rd the temperature was subnormal for the first time. The serum was discontinued. The breathing was much easier. He still had a fit each time he was fed, but he had no other fits between. There were no fits on the 5th. The abdomen and limbs were still rigid. On the 6th he took one ounce of milk extra by the spoon. On the 11th he was fed by the bottle and on the 28th he was discharged recovered.

Remarks by Dr. ABRAHAM.—The comparative rarity of tetanus neonatorum, its almost constant fatal termination, and the usually unsatisfactory results obtained from injection of anti-tetanic serum in acute cases, justify me in recording the above case in which recovery took place, and the serum appeared to have done some good. The disease would seem to be fairly common in tropical countries, especially in the West Indies, but it is comparatively rare in European countries. It is stated, however, that one out of every six children born in the Rotunda Hospital, Dublin, in 1782 died from the disease. In more recent times it was exceedingly fatal in St. Kilda in the Western Hebrides, where it was known as the "eight days' sickness"—84 out of 125 children dying within 14 days (Osler); but with this exception it is now very rare, as, according to Ware, "a case has not been admitted to St. Bartholomew's during the period covered by the statistical reports."[1] As to the fatality, no exact statistics are obtainable, the infantile form being included in the general statistics of tetanus. These show that for an incubation period of 10 days 4 per cent. of the patients recover, and for an incubation period of from 11 to 15 days 27 per cent. recover (Rose). With regard to the serum treatment, the general consensus of opinion, voiced by Kanthack, Roux, Nocard, and others, is summed up by Rose thus: "In man it has not been conclusively proved that recovery has ever been due to serum. Local antiseptics, narcotics, and strengthening treatment hold out the best hopes of recovery."[2]

EASTERN FEVER HOSPITAL.

A CASE OF PURPURA FOLLOWING DIPHTHERIA.

(Under the care of Dr. E. W. GOODALL and Dr. CONRAD BASAN.)

THE rarity of post-diphtheritic purpura is very great. We are so little acquainted with the essential cause of any form of purpura that it is of little value to speculate on the method of production of the purpura in this case. It is probable, however, that in all cases there is a modification, not only in the coagulability of the blood, but also in the walls of the capillaries.

A girl, aged 11 years, was admitted to the Eastern Fever Hospital on Sept. 16th, 1901, for diphtheria, of which the symptoms had appeared on the previous day. On the day of admission there was a thick layer of membrane on each tonsil, the cervical glands were enlarged, and the temperature was 103·6° F. Antitoxin (6000 units) was injected and the fauces were flushed with an alkaline solution every four hours. The progress of the disease was favourable and on the 22nd the membrane had quite disappeared. On the 23rd and 24th there was urticaria of the trunk, face, and limbs, without any rise of temperature, but on the 25th this rash had disappeared. On the 26th there was again a slight erythematous rash but no pyrexia. On the 27th a purpuric eruption made its appearance upon both the upper and lower extremities, chiefly about the elbows and the front of the legs. There were a few spots on the trunk and there was some hæmorrhage beneath the right conjunctiva. Mixed up with the spots on the skin was a circinate erythema. There was also bleeding from the nose and mouth, and pin-point hæmorrhages were observed in the buccal mucous membrane. The temperature was 100·2° and the pulse-rate was 130. On the 28th fresh purpuric spots appeared on the face as well as on the trunk and extremities. After this no further spots came out. Most of the spots were cutaneous, small in size, and of a purple hue, but a few were subcutaneous, larger, and of a blue colour. A few days prior to the attack of diphtheria the patient had been vaccinated on the left arm and at the time the purpura appeared the pocks were in the vesicular stage. Hæmorrhage now took place into and around the pocks, which after a day or two looked as if they would slough, but no such event occurred and the scabs separated in the usual way on Oct. 7th. In addition to bleeding from the mouth and nose bright blood was on two or three occasions passed per anum on Sept. 27th and 28th. On the 29th the hæmorrhages were already beginning to fade and the larger ones were of a greenish-brown hue, like old bruises. On this day the circinate erythema was still present. During the day the patient complained of pain in some of the joints and her temperature rose to 102·6° F. The pains in the joints were worse the next day, the large joints being chiefly affected. There was, indeed, some effusion into the right knee-joint. By Oct. 3rd this joint affection had quite gone. On Sept. 27th and 28th, while the hæmorrhages were coming out, the girl was very restless and anxious, complained much of thirst, and slept little. There were also nausea and occasional vomiting. On Oct. 1st the temperature became normal. After the 3rd recovery was fairly rapid, though from the 5th to the 15th there were pain and tenderness along the course and distribution of the ulnar nerve. There was never albuminuria at any time during the patient's stay in the hospital. She was discharged well on Oct. 24th. As for the treatment, calcium chloride, five grains every four hours, was given on the appearance of the purpura and was continued till Sept. 30th. Pain was relieved by opium and phenalgine. The nausea and vomiting necessitated the administration of food by means of nutrient enemata for two or three days.

Remarks by Dr. GOODALL.—I have ventured to record this case for two reasons. Firstly, because of its rarity; I have seen only three such cases, including the present one. The account of the first will be found in Vol. L. of the "Guy's Hospital Reports"; and of the other in Appendix I. to the "Report on the Antitoxin Treatment" made by a committee of the Clinical Society of London in 1898. A similar but more severe case was published in THE LANCET of July 20th, 1901, p. 132, by Dr. C. W. Buckley. Secondly, these rare cases of purpura following diphtheria must be distinguished from those common cases in which hæmorrhages, both into the skin and from mucous membranes, occur during the acute stage of the disease (hæmorrhagic diphtheria). Practically every case of hæmorrhagic diphtheria is fatal, whereas in cases of post-diphtherial purpura the prognosis is by no means always grave. In fact, my three cases all recovered, as also did that reported by Dr. Buckley. Dr. Buckley raised the question whether antitoxin has any share in the production of the purpuric symptoms. I do not think it has. My first case occurred before the antitoxin treatment was introduced, and I have met with a similar purpura following scarlet fever where also no antitoxin had been given.

For the notes of the case I am indebted to Dr. Basan,

[1] St. Bartholomew's Hospital Reports, vol. xxxvi., 1900.
[2] Der Starrkrampf bei Menschen, 1897.

assistant medical officer, under whose immediate care the patient was.

BROMLEY COTTAGE HOSPITAL, KENT.

A CASE IN WHICH THE VULCANITE MOUTHPIECE OF A PIPE WAS IMPACTED IN THE CHEEK AND PENETRATED THE FLOOR OF THE ORBIT.

(Under the care of Dr. HERBERT J. ILOTT.)

THE orbit is singularly tolerant of foreign bodies, and several instances are recorded of the impaction of tobacco-pipes in that cavity.[1] An important point that should be borne in mind is the tendency these foreign bodies have to pierce the orbital roof and so to cause serious or even fatal injury to the brain.[2]

A man, aged 42 years, was cycling downhill on March 18th while smoking a briar-root pipe with a vulcanite mouthpiece. The chain of the machine became detached and he was pitched forward over the handle-bar, falling into the road. He fell on his left side, sustaining a Colles's fracture of the left wrist and felt pain in the left side of his face. He noticed that the pipe was broken and threw away the bowl and wooden part of the stem, thinking that the mouthpiece was in the road, but no search was made for it. On the same evening he went to his club surgeon who attended to his wrist, applying splints. His mouth was bleeding from a wound on the inner side of the right cheek on the level of the first molar tooth, but no close examination was made of the injury inside the mouth. The face became very swollen and painful, the eyelids being so swollen that for several days he could not see out of the right eye. When the swelling of the lids had somewhat subsided he noticed that the eyeball was prominent and he had double vision. It was thought that the bone was fractured and that an abscess was forming, but no suspicion of the presence of a foreign body seems to have been entertained by the patient or his medical man. He was then sent to the Westminster Ophthalmic Hospital. He was told that the cheek wanted attention, but that when that was righted the eye trouble would disappear. This was on April 3rd; the wound in the mouth was discharging pus at the time. He returned home and continued the use of poultices and of fomentations which he had been ordered. At times he suffered much pain.

On April 21st he was sent to Dr. Ilott by his medical man. Dr. Ilott noticed the protrusion of the eyeball and felt a hardness in the right cheek. On the inside of the mouth was a sinus discharging pus. On introducing a probe a hard smooth substance was felt and on moving the probe to one side it sank into what felt like a fissure in the bone. On the 24th Dr. Ilott again examined him at the Bromley Cottage Hospital. On again probing the instrument struck against the hard substance and passed in some distance. On withdrawing it the end was noticed to be discoloured and smelt of nicotine. An incision was then made through the mucous membrane for about half an inch and on being deepened and inspected a circular black surface was exposed. Introducing a pair of necrosis forceps this was seized and a black vulcanite tobacco-pipe mouthpiece measuring two and seven-eighth inches was withdrawn. A probe passed along the track went through an opening in the bone into the orbit. The cavity was syringed out with weak perchloride solution and drained.

On May 3rd the patient was shown at a meeting of the North Kent District of the South-Eastern Branch of the British Medical Association at Dartford, and his case evoked much interest from the members assembled. On the 8th he was again seen at the Westminster Ophthalmic Hospital and the proptosis had nearly disappeared and vision was much improved. On the 14th Dr. Ilott saw him again. The tract had healed, the induration in the substance of the cheek had also gone, and the sight was normal.

Remarks by Dr. ILOTT.—The case is of interest from the fact of a foreign body of so large a size being impacted unsuspected for so long a time—nearly five weeks—and the rapid recovery and relief that followed its removal.

[1] THE LANCET, July 4th, 1891, p. 15. Brit. Med. Jour., 1880, vol. i., p. 514.

[2] THE LANCET, July 17th, 1886, p. 143.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Intestinal Obstruction due to the Pressure of a Vesical Sacculus upon a Coil of Small Intestine.—Alkaptonuria.

A MEETING of this society was held on Nov. 26th, Dr. C. THEODORE WILLIAMS, the Vice-President, being in the chair.

Mr. THOMAS BRYANT described a case of Intestinal Obstruction due to the Pressure of a Vesical Sacculus upon a Coil of Small Intestine in a man, aged 67 years, who during a brief illness from angina pectoris became the subject of intestinal obstruction, associated with a tumour rising from the pelvis and extending upwards in the abdomen to the right of the median line above the level of the umbilicus. Symptoms had gradually increased in severity for eight days, obstruction had become complete, and the vomit had become fæcal. An exploratory incision was made and it was found that the obstruction was due to the presence of a vesical sacculus, springing from the right side of the fundus of the bladder; this had by pressure upon a coil of small intestine caused complete obstruction. The existence of an abdominal tumour had been recognised by Dr. M. G. Biggs, the patient's medical attendant, at least one and a half years previously when he had been called in for some passing bladder trouble. It was then but small, only just rising out of the pelvis; at that time some enlargement of the prostate gland was also recognised. The patient survived the operation only 22 hours. No necropsy was permitted. The case was an unusual one, for it seemed certain that the cause of the patient's intestinal obstruction had been due to the pressure of the sausage-shaped vesical sacculus upon a coil of small intestine which passed behind it and between it and the spinal column, and this view was supported by the fact that on opening the abdomen the colon and small intestine on the right of the tumour were found pale and empty, whereas the small intestine on the left side was found full and congested, the seat of pressure upon the bowel by the tumour being very evident. It was likewise clear that the opening of communication between the sacculus and the bladder must have been very minute, for the bladder seemed to have done its duty during the formation of the sacculus in apparently a satisfactory way, and even at the time of operation, when the bladder was emptied by means of a catheter, the tension in the sacculus was not materially affected, for it was only upon manual compression of the sacculus that it was emptied, and then but slowly. It should not, therefore, be forgotten that a vesical sacculus might be the cause of intestinal obstruction.—Mr. REGINALD HARRISON said that he knew of two cases which were of interest in connexion with that reported by Mr. Bryant. In the first case, which was one of vesical sacculus, there had been during the course of the illness remarkable and unexplained attacks of constipation. An operation was performed and it was found that the sacculus came in contact with, and pressed upon, the rectum, and it was clear that the constipation was due to this cause, for subsequently the patient ceased to be subject to these attacks. The second case was also one in which a vesical sacculus was diagnosed. The patient was in a very feeble condition. The sacculus was drained, but the patient died, and it was found that the apex of the sacculus was adherent to the intestine and that the lumen of the gut at this point was reduced to about one-half its normal diameter.—Mr. CLINTON T. DENT said that it would be of interest to know if there was any stenosis of the intestine in Mr. Bryant's case. He thought that it was most unusual for a sacculus of the bladder in which there was no inflammation to cause obstruction of the intestine.—Mr. BRYANT, in reply, said that the first case mentioned by Mr. Harrison was very similar to the one which he had recorded, but the second case differed in that the sacculus was adherent to, and had caused actual narrowing of, the intestine. With regard to the condition of the intestine in his case it was clear that there was no actual stricture, for as soon as the bladder tumour was raised the contents of the distended intestine passed into the empty intestine. The

intestine above the obstruction was congested, while that below was pale and collapsed.

Dr. A. E. GARROD read a paper on Alkaptonuria, which will be found in full at p. 1484 of this issue.—Dr. THEODORE WILLIAMS regretted that more work on chemical pathology was not brought before the society, as he considered that great advance in medicine had been made along these lines. He referred to the importance of the recognition of alkapton in relation to insurance work and asked by what tests this body could be distinguished from sugar.—Dr. W. A. OSBORNE mentioned the case of a man who had been refused by an insurance office on account of what was supposed to be sugar in the urine. He had examined the urine and had found that homogentisic acid was present. Two brothers of this patient also had alkaptonuria. The cases of these brothers had been described by Dr. Pavy. If homogentisic acid was derived, as was suggested, from tyrosin then an alkaptonuric patient fed on a tyrosin-free diet should pass no alkapton. Such a tyrosin-free diet would be sugar, fat, and gelatin. Chemically it was difficult to see how tyrosin became converted into homogentisic acid. He further suggested that a patient should be fed with some of the intermediate products between tyrosin and homogentisic acid and the effect on the urine observed.—Dr. GARROD, in reply, said that it was difficult in his case to give an entirely tyrosin-free diet, as his patient was a child, aged four years, but the experiment had been tried abroad where an adult patient had only tea and brandy for three days. The result was that the homogentisic acid diminished to about one-third but did not entirely disappear.

MEDICAL SOCIETY OF LONDON.

Symptoms and Treatment of Moveable Kidney.

A MEETING of this society was held on Nov. 25th, Mr. JOHN H. MORGAN, in the absence of the President, being in the chair.

Mr. HENRY MORRIS read a paper on the Symptoms and Treatment of Moveable Kidney, which is published in full at p. 1467 of this issue.

Mr. MORGAN said that there was always a difficulty to ascertain what was true and what was false in the patient's symptoms. Many of these patients were neurotic. Mr. Morris had pointed out very clearly in what cases an operation should be performed. He thought that rest was of little value and that operation generally relieved the symptoms. In some cases on which he had operated the symptoms from which the patient suffered recurred.

Dr. T. J. MACLAGAN said that there were two points in which he differed from Mr. Morris. The first was with regard to treatment by rest, and as a proof of the efficacy of this in certain cases he mentioned the case of a woman who had suffered from the usual symptoms of moveable kidney. The patient was placed at rest for six weeks. More than one year after she was perfectly well and the kidney was no longer moveable. He mentioned a second similar case. He thought that the condition most frequently occurred in thin persons. The second point on which he differed was the statement of Mr. Morris that jaundice was not produced by a moveable kidney. He said that he had published three such cases; in one in which there was jaundice the patient was thought to have a gall-stone; an operation was performed and no stone was found in the gall-bladder, but there was a moveable kidney. This was fixed and the patient was completely cured. He mentioned another case in a woman who had frequent attacks of jaundice. In this case a moveable kidney was present, and after fixation the patient remained well. The third case had all the symptoms of hepatic colic with jaundice. Operation was performed and a moveable kidney was found and fixed. These cases seemed to prove that a moveable kidney might give rise to jaundice.

Mr. W. BRUCE CLARKE thought that the cases cured by rest mentioned by the last speaker might be cases of enteroptosis. In deciding whether an operation was advisable the amount of mobility of the kidney was not of such importance as the amount of pain which the mobility caused. The cause of pain, he thought, was due to the retention of urine in the pelvis of the kidney, and this condition could often be relieved by pressure on the abdomen. The association of these kidney conditions with digestive troubles was, he believed, due to traction on the stomach and gave rise to the severe attacks of vomiting. The method which he employed in fixing the kidney was one that brought the kidney close to the lumbar fascia.

Mr. F. SWINFORD EDWARDS said that in fixing the kidney it should be replaced so that it lay above the margin of the ribs, and he asked Mr. Morris what method he adopted in order to ensure this. He mentioned a case in which hydronephrosis followed on nephropexy. He said that he only remembered one case in which the kidney again became moveable after he had performed a nephropexy. Some six months after the operation there was a return of symptoms and the kidney was again moveable, and at times was easily felt, but it could not be reduced. At other times, however, it seemed to return to its position and could not be dislocated by any movement of the patient. He intended to re-fix this kidney in the patient but had not yet had the opportunity.

Mr. L. A. BIDWELL said that he would be glad of any information as to the subsequent history of the patients operated on. He had investigated his own cases and in some after two or three years the symptoms had tended to return.

Mr. W. G. SPENCER said that in those cases in which symptoms returned he had done a nephrotomy, for he considered that the pain was probably due to a slight hydronephrosis or accumulation in the pelvis of the kidney. He had himself often incised the kidney at the same time as he had fixed it.

Mr. MORRIS, in reply, said that with regard to the curative effect of rest it was a matter of individual experience but that the cases mentioned were probably cases of enteroptosis. He believed that a deficiency of the perinephritic fat tended to the production of moveable kidney and Dr. Maclagan's cases seemed to support this view. With regard to the cases of jaundice produced by moveable kidney he said that he did not think that they were due to the direct pressure on the biliary passages, but they might be due to dragging on the duodenum and thus producing obstruction of the duct at its entrance into the intestinal canal. He thought that the increase in the size of the kidney was due not to hydronephrosis but to venous congestion due to obstruction of the veins. He mentioned a case in which he had at first fixed a hydronephrotic kidney, but four months later he had to remove this owing to a recurrence of pain. He had never seen hydronephrosis follow an operation. With regard to after-results he hoped he had made it clear in his paper that the cases in which symptoms returned were in the neurasthenic patients. He described Valliet's operation, which was, he said, unnecessarily severe, and he did not think it advisable either in fat or in neurotic patients, but it had the advantage of drawing the kidney up under the ribs.

CLINICAL SOCIETY OF LONDON.

Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia.—Fragilitas Ossium.

A MEETING of this society was held on Nov. 22nd, Mr. HOWARD MARSH, the President, being in the chair.

Mr. T. H. MORSE read a paper on Two Cases of Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia. He referred to the articles published by Victor Horsley in 1891, those of W. Rose in 1892, and also to those of Hartley, Krause, Jonathan Hutchinson, jun., and Lynn Thomas. Two cases were related in which the Hartley-Krause operation was performed, the bone being removed with mallet and gouge, and gouge cutting forceps. After section of the second and third divisions of the fifth nerve the foramina ovale and rotundum were blocked with Horsley's wax for the purpose of preventing reunion of the divided nerves. In both cases cure was obtained, one having been done more than two years ago.—Mr. J. HUTCHINSON, jun., reported the results of five cases in which he had excised the Gasserian ganglion, four of the patients being shown at the meeting. The operation had been performed in one case four years, in two cases three years, and in one case two years previously. In not one of the five patients had there been the slightest recurrence of the neuralgia. He urged that the temporal route should alone be employed to gain access to the ganglion, and quoted one of his cases in which the operation from below (by the pterygoid route or Rose's method) had been previously performed

by another surgeon. The operation had been carried out in two stages and it was believed that the ganglion had been at any rate in part removed. The return of the neuralgia worse than before and the imperfect anæsthesia had raised doubt as to this, and at the final operation by Krause's method—i.e., through the temporal route—it was proved that the ganglion was quite intact and that the base of the skull had been previously penetrated outside the foramen ovale. Such a case well illustrated the fallacies attending the operation when performed by the pterygoid route. He pointed out that in these cases of severe epileptiform neuralgia of the fifth nerve the ophthalmic division was affected in only one-fifth of the cases, that probably in some of these the involvement of the first division was in a sense reflex and would be cured by removal of the second and third divisions with the corresponding part of the ganglion, leaving the ophthalmic trunk untouched. Many cases proved the correctness of this view, and he did not know of a single one in which after this course had been thoroughly carried out the neuralgia had returned in the ophthalmic division. If the latter were spared the eye ran no risk, whilst other complications, such as injury to the oculo-motor nerves and the cavernous sinus, might be avoided with comparative ease. He urged that an anæsthetic cornea was never safe, and instanced one of his cases in which, after complete removal of the ganglion, the corresponding eye had become inflamed and required excision after several months had elapsed. In his later cases he had deliberately avoided cutting the ophthalmic part. As regards the details of the excision it was probably better to use a large trephine and cutting forceps (without subsequent replacement of bone) than to turn down a flap of bone and overlying tissues. It was not always necessary to tie the meningeal artery, especially if the lower part of the ganglion alone were dealt with. Hæmorrhage was lessened by keeping the patient during the whole operation in a sitting position. An electric head lamp was essential and the use of the curette "to break up the ganglion" was strongly deprecated. Intra-dural division of the fifth nerve was far more dangerous than extra-dural excision of the ganglion. Dr. Tiffany's statistics of 108 cases, with a mortality of 23 per cent., did not at all represent the actual risk of the Hartley-Krause operation, since amongst them were included cases operated on by many methods, including the dangerous intra-dural one, and such needlessly severe methods as that advocated by Doyen. The latter surgeon had lost two out of three of his cases directly from the operation. The mortality of the operation by the temporal route in skilled hands was probably under 10 per cent., and so lasting were the results that without doubt in the future most of the operations on the main branches of the fifth nerve for severe neuralgia would be abandoned in its favour. He urged that the victims of epileptiform neuralgia should not be left to develop suicidal tendencies or to poison themselves with morphia before being given the chance of a permanent cure by the operation.—Mr. CUTHBERT S WALLACE showed a case in which he had intended to remove the whole Gasserian ganglion from a patient who had suffered from severe epileptiform neuralgia for several years. He had, however, failed to remove the whole of the ganglion owing to severe hæmorrhage from the cavernous sinus. He had also to tie the external carotid owing to the hæmorrhage from the middle meningeal artery. The patient made a good recovery and had remained free from pain ever since the operation.—Mr. C. A. BALLANCE said that he had removed the Gasserian ganglion in 10 cases on account of severe neuralgia. He considered it advisable to remove the whole ganglion and also a portion of the nerve on the proximal side. Hæmorrhage was often severe but could be avoided by carefully isolating the ganglion. He thought that old age should not be urged as a reason against operation and stated that he had operated on two women, one aged 84 years and the other aged 71 years, with success. He considered it well to perform the operation in two stages, in the first of which the ganglion was exposed and in the second stage some four or five days later the ganglion was removed. He thought that if the operation was done at one sitting the risk to the patient was greatly increased and probably accounted for the high mortality. The ganglion could be easily isolated with care without any risk to the cavernous sinus, the greatest danger being in attempting to remove the first division. He hoped the time would soon come when it would be possible to separate the sensory from the motor fibres and to divide the former without the latter.—Mr. CLEMENT LUCAS asked if the bone had been replaced and mentioned a case in which he had put the bone back with the concave surface outward. The patient did perfectly well.—Mr. F. C. WALLIS mentioned the case of a man who had suffered from severe neuralgia for 16 years. He had had most of the teeth removed. It was arranged to remove the Gasserian ganglion, but before doing so the teeth were again carefully examined and the stumps of three molars were removed, and from that time onward the patient was free from attacks, although he previously had had from 29 to 44 per diem.—Mr. MORSE replied.

Mr. WARRINGTON HAWARD described a case of Fragilitas Ossium in a boy, aged 10 years, who was admitted into St. George's Hospital under his care in October, 1889, on account of extreme deformity of the legs. He was a bright, intelligent, and healthy-looking boy, with no signs of rickets. He sat upright and his spine was straight. The bones of the arms and forearms were much deformed and were curved outwards to a varying extent. They showed signs of many old fractures. The hands were fairly developed and were used actively. The lower limbs were less developed than the upper. The bones were thin and with sharp margins. The femora were both curved forwards and outwards. The tibiæ both showed an extreme degree of forward curvature, so that the lower half was at a right angle to the upper half of the leg. There was evidence of numerous past fractures. The muscles of the legs were much wasted and the skin was adherent over the most prominent part of the tibia. Photographs of the boy and skiagrams of the bones were shown. The boy's health appeared in most respects to be good, with the exception of a remarkable condition of the urine. The urine when passed appeared to be natural, but on standing deposited a large amount of calcium salts which formed a mortar-like sediment. An analysis of the urine kindly made by Mr. J. A. Gardner showed it to contain a very large excess of lime salts. The history of the case showed that the boy was of healthy parentage and that of eight children none but this boy had any signs of disease. The only notable point in the family history was that before the birth of this child (the seventh) the mother had been weakened by rapidly succeeding pregnancies. When born this child was found to have fractures of both humeri and two ribs and subsequently 23 fractures of long-bones were recorded, all from slight causes. He had never walked alone. He had lived in a healthy part of the country and had been well fed and cared for. He was given, after admission to the hospital, cod-liver oil and a highly nutritious diet, and attempts were made to straighten the limbs by extension but without success. In January, 1900, he fractured the left femur when turning in bed, but the bone united well under ordinary treatment. In March, an analysis of the urine by Mr. Gardner having shown that the excessive excretion of lime salts had ceased, Mr. Haward straightened the right leg by the excision of a wedge-shaped piece of tibia, the ends of the bone being wired together. The bones united soundly. The left leg was subsequently operated upon with a similar result and the boy was sent home with leather splints on. He is now learning to walk. Reference was made to a similar case recorded by Mr. Clinton Dent, and the paper concluded with some remarks upon the connexion of the bone changes with the condition of the urine.—Mr. CLINTON T. DENT mentioned the case of a man, aged 29 years, in whom multiple fractures had occurred—he was unable to sit up and unable to hold up his head. He was a watchmaker by occupation and he had had an apparatus made which supported his head and then he was able to go on with his work. The urine in these patients was often almost solid with phosphates. He said that callus was often thrown out around these bones before the fracture occurred, and that when it did occur it was rather a bending of a softened bone than an actual fracture.—Dr. F. J. POYNTON said that he had had under his care a child who was first brought to him with extreme tenderness of the limbs. He had at first thought that it was a condition of scurvy, although there were no other manifestations of that disease. Greenstick fractures occurred in both femora. Some months later the left humerus became tender; fractures then occurred, first in the left and then in the right humerus, and again at a later period the tibiæ passed through the same stages and fractured. There was always irregular fever associated with these attacks. There was no evidence of congenital syphilis in his case. He regarded the case as possibly the acute phase of the condition which Mr. Haward had described that evening.—Mr. J. HUTCHINSON, jun., mentioned a case in which the radius and ulna were similarly affected; this, however, occurred in a child who was

the subject of congenital syphilis.—Mr. CLEMENT LUCAS suggested that inherited syphilis might play an important part in the production of the disease.—Mr. HAWARD, in reply, said that the great interest of these cases centred round their causation. He was certain that in his case the condition was not due to inherited syphilis; there was no tenderness of the bones at any time and his case differed in this respect from that quoted by Dr. Poynton. He was certain that it was not due to rickets.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SURGICAL SECTION.

Opening Address.—Laparotomy for Intestinal Obstruction.—Exhibition of Cases.

A MEETING of this section was held on Nov. 8th, Mr. THOMAS MYLES (President of the Royal College of Surgeons in Ireland), the President, being in the chair.

The PRESIDENT took for the subject of his opening address the Advantages of Operative Interference in Complicated Fractures of the Long Bones, as practised by Mr. Arbuthnot Lane in London. He compared the surgical audacity of operative measures on the abdominal contents and the timidity which surgeons exhibited in the more accessible regions of the upper and lower extremities in cases of fracture. The older classifications of fractures were, he considered, too artificial to be helpful, and were, to the beginner, stumbling-blocks to diagnosis. Cases of fracture complicated with dislocation were difficult of diagnosis, and where, as was sometimes the case, calcareous deposits formed the Roentgen rays gave little aid. He had met one such case in which a fracture of the anatomical neck of the humerus was complicated with dislocation of the head of the bone and the deposition of a large calcareous mass which extended up to the clavicular articulation. All the classic symptoms of separation of the greater tuberosity were present and the pathological condition was only made known by raising the deltoid muscle. In such doubtful cases he recommended that the deltoid should be separated from its brachial insertion and the part exposed so that the lesion might be recognised. The operation presented no difficulties, was quickly performed, and was comparatively free from risk.

Mr. J. LENTAIGNE read a paper on a case in which Laparotomy had been twice performed, with six months' interval, for the relief of Intestinal Obstruction resulting from the presence of large concretions in the colon. The patient, a boy, aged 10 years, had been addicted to chewing woollen fabrics, blankets, and such like, and when admitted to hospital was suffering from constipation and vomiting which daily became worse. For a week he got injections through an O'Beirne tube which were unattended by any good results. An operation was performed. The abdomen was opened, two large rounded concretions were removed from the colon, and the boy made a good recovery. Six months afterwards he was again admitted to hospital and again after a fair trial of injections a laparotomy was performed and the colon was opened and evacuated, in the performance of which the old silk continuous sutures of the previous operation were met with and were found practically unaltered. An attempt was made to create a cæcal fistula in order to prevent the recurrence of the condition. The fistula, however, closed, and the boy, now convalescent, left the hospital, to return 12 months afterwards with the same symptoms—vomiting and constipation. On this occasion the rectum was found to be packed with a hard mass of fæces and fibrous material which was scooped and washed out. The boy made a good recovery without any further operation.—The PRESIDENT considered the paper very instructive, as showing the difficulty of diagnosing abdominal tumours, and said that in a somewhat similar case he had seen good results obtained from olive oil injections followed by the use of electricity, which produced free vomiting and purging.—Mr. H. GRAY CROLY thought that palliative treatment by injections might have been given a more extended trial before resorting to colotomy. He thought the second operation unnecessary, and there was nothing to indicate that it had been advantageous.—Mr. J. S. MCARDLE quite agreed with Mr. Lentaigne in the necessity for early operation in such cases; nothing was gained by delay, and it was sound surgery to operate and to remove the concretion from above. He was particularly pleased with the fulness of detail with which the paper was presented.—Mr. A. B. MITCHELL (Belfast) congratulated the author of the paper on finding a hypertrophied colon. In one of his cases the colon was so much attenuated that the tissue could not hold the sutures; the wound opened and the patient, a boy, died.—Mr. L. H. ORMSBY gave an instance of a patient under his care who was in the habit of eating her hair, nibbling off portions until she produced a mass of matted hair in her stomach, which he excised.—Mr. DOYLE drew attention to the tendency of alimentary concretions to simulate malignant disease of the bladder. A patient under his care for malignant growth of the bladder was found after death to have a healthy bladder, the trouble having been caused by an immense accumulation of charcoal in the rectum and descending colon.—Mr. A. CHANCE instanced the case of a boy, who, from eating straw, formed a mass in his ileum of about the size of a banana which necessitated operation.—Mr. LENTAIGNE, in reply, thought that any further use of palliative remedies would have done away with all prospect of success. The attempt at formation of a cæcal fistula was not attended with any benefit, as might have been expected had they known the real cause of the trouble, but having performed it he thought it but right to mention it.

Mr. CROLY showed: (1) A child, aged four years, exhibiting results of Excision of the Astragalus for Tuberculosis; (2) a child, aged seven years, showing results of Excision of the Astragalus and the end of the Fibula, with Gouging of the Os Calcis for Tuberculosis; and (3) the Astragali removed from Three Patients.

Mr. E. H. TAYLOR showed: (1) A patient in whom the so-called Excision of the Superior Maxilla had recently been performed for Sarcomatous Disease; (2) cases showing the result of operation for complete Cleft of the Hard and Soft Palate; and (3) a case presenting extensive Varicosity of the Veins of the Right Upper Extremity.

Mr. TAYLOR also exhibited: (1) Parts removed in the Operation of Suprapubic Prostatectomy; (2) a Kidney removed for Calculous Disease; (3) Sarcoma of the Superior Maxilla; and (4) Comminuted Fracture of the Atlas Vertebra, the result of a fall.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A pathological meeting of this society was held on Nov. 15th, Dr. A. G. Barrs, the President, being in the chair.—Dr. Harvey Baird read a paper on a case in which Emphysema of the Liver developed post mortem in a female patient of cachectic aspect, 71 years of age. At the necropsy 36 hours after death the liver was noticed to be of a pale, reddish yellow colour, and of spongy consistence. A few blisters were observed on its surface, and when cut into it was seen to be riddled with air-spaces of small size, minute bubbles escaping on pressure. The liver had a peculiar offensive pungent odour, which was still present in a portion of the organ imbedded in paraffin. On microscopical examination the liver was found to exhibit numerous gas-containing cavities from one-sixth of a millimetre to two millimetres in diameter, which pressed aside the liver columns. No leucocytic emigration had occurred and the liver cells were unaltered beyond exhibiting pigmentary change. Bacilli from 3μ to 6μ in length, staining by Löffler's and Gram's methods, were found massed together in very large numbers throughout the liver substance. The capsule of these micro-organisms was not very distinct. They were arranged singly, in pairs, or in chains, and exhibited granular contents. In the remaining viscera no similar condition was recognisable on naked-eye observation. No point of entry of the bacillus was ascertained, but the condition of the alimentary mucous membrane was not examined.—Dr. C. Powell White and Mr. P. J. Cammidge referred to Dr. Mantle's case in which they found the bacillus aerogenes capsulatus in the organs. Here there was evidence to show that the infection took place before death.—Dr. E. F. Trevelyan and Dr. T. W. Griffith made some remarks on ante- as against post-mortem infection and Dr. Baird replied.—The following specimens were shown:—Dr. T. J. Wood (Bradford): (1) A cast and a specimen of Bony Outgrowths from the Third Cervical Vertebra; (2) Gall-stone removed from the Common Bile Duct by Duodenal Incision and slitting up of the Papilla; and (3) Renal Calculi.—Mr. R. A. Forsyth: Osmic Acid Preparations from a case of

Pseudo-hypertrophic Paralysis.—Mr. Edward Ward: (1) Malignant Stricture of the Small Intestine excised from a woman, aged 62 years; (2) Hydronephrotic Kidney due to Congenital Kinking of the Ureter removed from a woman, aged 34 years; (3) two Water-colour Drawings of Actinomycosis of the Face; (4) Specimen of Soft Sarcoma of the Thigh; and (5) Epithelioma following Lupus (with photographs).—Dr. Barrs and Dr. Trevelyan: A Cyst of the Cerebellum.—Dr. W. R. Wilson (Doncaster): (1) A Sarcoma involving the Body of the Sphenoid, Meninges, Orbits, and Naso-pharynx of two years' duration; and (2) a Sarcoma of the Tonsil perforating the Internal Carotid and producing Fatal Hæmorrhage.—Mr. Cammidge: (1) A specimen of Sputum showing enormous numbers of Tubercle Bacilli; and (2) a preparation of Diphtheria Bacilli straight from the Throat stained by Neisser's method.—Mr. H. Littlewood: (1) Ectopic Gestation with the Vermiform Appendix incorporated in the Wall of the Sac; and (2) Inflamed Vermiform Appendix with Concretions removed during the third month of Pregnancy.—Mr. Littlewood and Dr. Trevelyan: Medulla Oblongata and Pons from a case of Facial Cellulitis complicated by a Hemiplegia. A pure culture of a staphylococcus was obtained by Dr. Trevelyan from a metastatic abscess in the heart and the same micro-organism was found in the meningeal exudation.—Dr. A. Bronner (Bradford): Specimens of (1) Tuberculous Growth of the Nasal Septum; (2) of the Middle Turbinated Bone; and (3) of Conjunctivæ Bulbi.—Mr. W. H. Brown: Sarcoma of the Kidney.—Dr. T. Churton: (1) Sarcoma of the Brain; and (2) Hour-glass Stomach, found post mortem. There were no symptoms during life.—Dr. J. B. Hellier: (1) A Uterus from a case of Puerperal Septicæmia; and (2) an Ovarian Dermoid.—Mr. Mayo Robson: (1) Traumatic Aneurysm (Brachial) from the patient shown at the last meeting; (2) Calculous Nephritis with enormous Dilatation of the Kidney Pelvis; (3) Carcinoma of the Stomach (excised); and (4) Cystic Fibroma of the Uterus.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on Nov. 19th, Mr. C. A. Morris, the President, being in the chair.—Dr. G. F. Petrie (Research Student, Jenner Institute) read a communication on Some Aspects of the Method of Cryoscopy. He pointed out that a knowledge of the laws involved in the case of simpler substances than blood was essential in order to have a clear conception of the principles on which the method was founded. Hedin's researches on the freezing-point of the blood were referred to, in which he found that its albuminous constituents played almost no part in the osmotic pressure of the serum, and that this was due almost entirely to its salts. Thus a relatively large percentage of a complex toxic body in the blood would have very little effect on the depression of its freezing-point, while a slight excess of the NaCl of the blood would produce a relatively greater depression, and the determination of the freezing-point of the blood simply measured the osmotic pressure of the serum; it gave no indication whatsoever as to the composition of the blood or as to the presence in it of what might be roughly styled "impurities." The application of the method in obscure cases of hepatism, as suggested by Ogston, necessitated a more exact knowledge of the pathology—not to say the physiology—of the functions of the liver than they at present possessed. The impracticability of the method as applied to urine seemed self-evident on considering the widely varying concentration of its salts dependent on the quality and amount of diet and influenced by the activity of other eliminating organs. A difficulty was introduced in the case of blood by the fact that the osmotic pressure of the serum varied considerably in many general diseases with no renal complication. In such a contingency a large amount of material carefully studied from every possible point of view might furnish a generalisation which would give assistance in arriving at a decision when the propriety of operating was open to question.—Dr. Petrie also gave a demonstration of the Hæmolysins and Anti-hæmolysins of the Bacillus Pyocyaneus.—Dr. C. C. Gibbes showed cases of Valvular Heart Disease which illustrated the difficulty that occurred in diagnosing some of the basal diastolic murmurs. Dr. Gibbes dwelt at some length on their conduction, explaining the variations that appeared in the cases shown. For purposes of diagnosis he considered that the points which required attention among the general characters of a case were: (1) the conduction of the murmur; (2) the alteration effected in its intensity by change of position; and (3) when the second sound was reduplicated the relation which the murmur bore to the pulmonary and aortic portions of the reduplication.—A discussion followed, in which Dr. W. Ewart and Dr. T. V. Dickinson took part.—Mr. A. F. Penny read a paper on Errors in Diagnosis Avoidable and Unavoidable. The majority of avoidable errors in diagnosis were due to hurried and inefficient examinations of patients, directing too much attention to symptoms and too little to physical signs and *vice versâ*, and failing to use the different instruments of precision—e.g., the ophthalmoscope, laryngoscope, and specula of different kinds. All successful diagnosticians possessed the synthetical faculty as well as the analytical, the capacity of coming to the point. No amount of training or education would give this to a man who had not got it in him. Special stress was laid on the importance of the practitioner attending post-graduate hospitals and thus keeping abreast of the times. Book knowledge was good in its way, but it was not living knowledge. The abdominal cavity was the region of surmises and surprises and many unavoidable errors in diagnosis were made in abdominal cases. Many examples of avoidable and unavoidable errors in diagnosis were given.—A discussion followed in which the President, Dr. Ewart, Dr. Gibbes, Dr. J. Blumfeld, and Dr. Dickinson took part.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The second meeting of the session of this society was held on Nov. 20th, Mr. W. B. Holderness, the President, being in the chair.—Microscopical preparations were exhibited illustrating Placental Polypus, Vesicular Degeneration of the Placenta, Hæmorrhage in the Placental Tissue, and Colloid Degeneration of the Placenta, the slides being lent by Dr. G. Leslie Eastes, of the Laboratory of Clinical Pathology, Queen Anne-street, London, W.—Dr. E. B. Hulbert showed the organs from a case of Cholecystitis occurring in a man, aged 65 years.—The President showed a case of Hodgkin's Disease in a lad, aged 17 years. In addition to enlarged glands in the neck and axillæ there was a large swelling in the left side of the sternum thought to be due to glandular growth in the mediastinum.—Mr. W. Atkin Thompson showed a case of Recovery from Severe Angina Ludovici. A small deep scar alone remained as the result of a huge incision below the jaw. The resulting sinus had been plugged with ribbon gauze.—Captain F. S. Brereton, R.A.M.C., showed: (1) a case of Morbus Cordis characterised by a murmur limited to a small area of the cardiac region (there was a good deal of hypertrophy); and (2) a case of Enlarged Testis in a young soldier originating in a blow (there was considerable thickening of the cord and testicular sensation was in abeyance).—The cases having been discussed at some length, Mr. J. H. Tomlinson showed an Electric Lamp Perimeter designed for the purpose of testing colour or light fields in a dark room. It consisted of a small electric lamp mounted and sliding on the quadrant, with two adjustments, so that its position could be altered by either the physician or the patient. Caps of different coloured glasses or solutions could be fitted over the lamp and the size of the aperture could be varied by a diaphragm. The eye was fixed by a central spot of luminous paint. Mr. Tomlinson found that the fields for colour pigments differed from those for lights of the corresponding colours. The field for green was smaller than was that for red, while this again was smaller than was that for blue. It was important to note that in hysteria this order was often reversed. The importance of the perimeter in glaucoma was dwelt upon, any curtailment of the field of vision being at times even a more important sign than increased tension. The curtailment was manifested first on the nasal side of the field.—Mr. W. J. Handfield Haslett being prevented from attending, his paper, entitled, "Some Points in the Prognosis of Mental Disturbance," was read by the honorary secretary. The paper commenced by discussing the factors influencing the prognosis of mania, the questions of age, sex, and history, the character of the delusions, the periodicity of attack as affecting the chances of recovery in mania and in the varieties of acute delirious mania, puerperal mania, the insanity following the exhaustion of typhoid fever, and adolescent insanity being entered into at length. In the prognosis of melancholia the weight attaching to the cause, history of onset, early treatment, and the character of the hallucinations was dwelt upon and stress was laid on the importance of inducing a growth of fat in this condition. The prognosis in conditions of dementia could not, owing to want of time, be more than touched upon, but some points influencing the duration of life in this condition were noted. The

influence of congestive seizures upon longevity in the case of the general paralytic was alluded to in some detail. The effect of epileptic attacks upon the immature and mature brain was next discussed, the impossibility of laying down rules as to when dementia would supervene in these cases being insisted on. Finally, the paper dealt with some points affecting the prognosis in the insanities of syphilis, alcoholism, and senility, and concluded with a warning not to be too ready to condemn a patient as suffering from dementia after an acute mental attack.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Nov. 13th, Mr. John Gay, the President, being in the chair.—Mr. Cecil R. Lyster showed two cases of Local Cancerous Disease which had been treated by the x rays at Bolingbroke Hospital. The first case was that of a man, aged 65 years, who came under notice on March 1st, 1901, suffering from a typical epithelioma of the lower lip. The rays were applied on March 5th, 6th, 7th, 8th, 9th, and 11th, for periods of 10 minutes, with resulting congestion. The ulcer was then discharging a thin serous fluid and a healthy granulating surface was beginning to make an appearance. Further treatment was discontinued until March 19th, by which time the congestion was disappearing, the ulcer being smaller, cleaner, and definitely not so hard as before. The rays were again applied on March 19th, 20th, 21st, and 22nd. Less congestion resulted, and the ulcer daily grew smaller and healthier. Treatment as hitherto was continued on March 25th and 26th, and on the first three days of April, marked diminution in the size of the ulcer and growth being manifest. The rays were applied for the last time on April 10th, by which time the ulcer had practically healed, and except for a slight scar the lip looked normal, although some slight thickening towards the middle line was still apparent. Since that time the patient, thinking he was cured, absented himself from the hospital until Nov. 13th, and it was then found on examination that the lip was quite healed but there was still some slight thickening in the middle line and he was advised again to undergo the treatment for a short time. The account of the second case was read by Mr. Lyster for Mr. Thomas Bryant. The patient, a woman, aged 43 years, came under Mr. Bryant's care in August, 1901, for a recurrent cancerous growth which involved the scar of an operation which had been performed in December, 1900, and which had manifested itself again about one month before Mr. Bryant saw her and seven months after the original operation. Her condition was as follows. The clavicular flap was the seat of tubercles of a florid red colour, and the lower flap near the original scar was dotted with similar tubercles. The upper flap near its axillary end was also the seat of a raised tumour of the size of a crown-piece, the surface of which was breaking down. In front of this tumour was a second one situated beneath the skin, with a convex surface and apparently infiltrating its deeper layers, as the skin over it was fixed. The patient complained of much pain at the seat of the disease. At the present time, three months after continuous treatment, it had to be reported that all pain had ceased and that this result was secured about two weeks after the treatment was commenced; and that many of the active tubercles had entirely disappeared, and all were disappearing. The ulcerating nodule, of the size of a crown-piece, upon which a scab existed when the treatment was started, had now healed under the scab and had flattened out. Mr. Bryant therefore considered that if the treatment was continued the acute form of the disease which existed in its recurrence would be entirely checked. The treatment was painless and could be employed in all cases where the disease was not otherwise suitable for operative treatment.—Mr. P. Macleod Yearsley then read a paper, entitled, "The Diagnosis and Treatment of Pain in the Ear."

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Nov. 15th, Mr. J. Lionel Stretton, the President, being in the chair.—The President showed: (1) A Portion of the Sigmoid Flexure containing a tight cancerous stricture, removed from a woman, aged 42 years; and (2) a woman, aged 36 years, from whom he had removed the whole of the breast for a recurrent growth.—The President also read notes of a case of Death under Chloroform of a dark-brown mare, eight years old, well-bred, highly nervous, in excellent condition, suffering from two large suppurating lumps over the elbow. As he had had no previous experience of anæsthetising horses he called in the aid of his usual veterinary surgeon together with a qualified assistant. The anæsthetic was commenced about 3 P.M. on Sept. 3rd after the mare had been hobbled and thrown down in the usual way. She had been prepared by giving her a bran-mash the night before and a meal of bran-and-chaff damped at 8 A.M. that day, this being her last meal. She inhaled the chloroform quite quietly; there was no struggling and the respirations were long and deep. The President had just removed the first lump and was preparing to sew up the wound when the veterinary surgeon informed him that she had stopped breathing, and all efforts to restore animation, including artificial respiration, strong ammonia, &c., were unavailing. The time from the commencement of inhalation was about 10 minutes. Methylated chloroform was administered, being given in the following way. A towel was laid on the ground under the animal's head, a large carriage sponge was soaked in chloroform and placed over her nose and mouth, and the towel was folded up over it. A second towel was folded over this. When more chloroform was required the outer towel was removed and the chloroform poured over the other one to soak into the sponge. The President said that it was not for him to question the methods employed, but it struck him at the time that to administer chloroform to a human being in such a manner would be courting disaster. He considered that pure chloroform ought to have been used and that it should have been administered slowly with the allowance of plenty of air.—Dr. O. C. P. Evans read notes of a case of Nephritis with Suppression of Urine. The patient, a man, aged 43 years, had been ailing for several years with attacks of nausea, vomiting, and headache, and when seen by Dr. Evans he was suffering from anasarca and slight ascites. On Oct. 12th he passed a small quantity of urine and vomited continuously all day; from that date till Oct. 15th no urine was passed, and from that date till his death in a state of coma on Oct. 23rd he passed only half an ounce of urine. The bladder was empty throughout. At the necropsy both kidneys were found to be much contracted; the capsule of the left one peeled off easily while that of the right one was somewhat adherent.—Dr. A. G. Naylor read a paper on Fractures which was followed by an interesting discussion.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 20th. Dr. E. C. Kingdon presided, and there was a good attendance of members when Dr. C. H. Cattle (who was a delegate from the society to the British Congress on Tuberculosis held recently in London) read a paper on the Relationship of Human to Bovine Tuberculosis. He first called attention to one or two fundamental principles. One of these was expressed in the first resolution passed by the Congress—namely: "That tuberculous sputum is the main agent for the conveyance of the virus of tuberculosis from man to man and that indiscriminate spitting should therefore be suppressed." And it was further recommended that all public hospitals and dispensaries should present every out-patient suffering from phthisis with a leaflet containing instructions with regard to the prevention of consumption, and should supply and insist on the proper use of a pocket spittoon. Dr. Cattle brought forward the following reasons for believing in the identity of human and bovine tuberculosis. 1. The bacilli found in each case were extremely alike both in form, staining reaction, and mode of growth under artificial cultivation. 2. These bacilli, whether of bovine or human origin, produced typical tuberculosis when injected into rabbits or guinea-pigs. 3. Tuberculin prepared from human tubercle bacilli produced a characteristic reaction when injected into tuberculous cattle just as it did when injected into man. The objections which could be urged against each of these statements were then cited, the similarity of the bacilli, it was said, did not amount to identity of form, the bovine bacillus was not beaded like the human one and it was also shorter and thicker. In pure culture there were some differences in the mode of growth and the bovine bacillus would not grow on glycerine-agar while the human one would. Also it was a fact admitted by all observers that while both bacilli were pathogenic for animals the bovine bacillus was much more virulent. With regard to the tuberculin reaction Koch explained that although the bacilli were different they belonged to the same group, the members of which gave a common reaction with toxins. Dr.

Cattle then dealt further with the different conditions of tuberculosis in man and beast, quoting from many observers. —After considerable discussion on the subject of the paper a hearty vote of thanks was accorded to Dr. Cattle for his very interesting address.

MIDLAND MEDICAL SOCIETY.—The second ordinary meeting of this society was held on Nov. 13th, Mr. Arthur Oakes, the President, being in the chair.—Mr. H. H. C. Dent and Dr. William Cassels were elected members of the society.—Dr. Walter Jordan showed a woman who had the symptoms of Spastic Paraplegia—exaggerated knee-jerks, ankle-clonus, and rigid spasm of the calf muscles on both sides, so that she walked entirely on her toes, and was unable to put her heels to the ground. She could get about only when helped by someone or by holding to the furniture. The history she gave was that five years ago while in a tramcar she had an attack of giddiness and her right arm and leg went numb. When she had to get out she found that she could not walk properly, and she reached home by holding on to the walls as she went. After this the difficulty of walking increased gradually up to the present time and the contraction of the calf muscles developed. In June of the present year she had another attack of giddiness and she fell. Since this the left leg, previously unaffected, had shown the same symptoms as had the right. When seen first in August the muscles of the right side of the face seemed weaker than those of the left, but this could not be observed at the meeting. The patient was 42 years old, married, and had had seven children, of whom two were living, five having died under 12 months of age. There were no symptoms of cardiac disease. The diagnosis was cerebral thrombosis, but that of embolism was preferred by a member in discussing the case.—Dr. R. F. C. Leith showed tube, plate, and microscopical specimens illustrating the Morphology of the Plague Bacillus and the Method of its Diagnosis in a suspected outbreak of the disease. He gave a short account of the evolution of its more characteristic shapes and referred to the Glasgow outbreaks and the importance of the rat as a disseminator of the disease.—Mr. L. P. Gamgee read a paper on Strangulated Hernia.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Nov. 22nd, Dr. Arthur T. Davies, the President, being in the chair.—Mr. F. Swinford Edwards opened a discussion on the Treatment of Gonorrhœa. He favoured injections of mercurol of 0·5, 1, or 2 per cent. For treating gleet he pinned faith to irrigation with a weak antiseptic regularly used night and morning. He said it was of the greatest importance to have the total urine collected for examination so that shreds, without discharge, should not be overlooked. If shreds were found to be settled in the glass these should be bacteriologically examined. The examination was almost certain to reveal the presence of the gonococcus. That knowledge should lead to an interdiction of sexual intercourse and that advice followed would prevent most of the cases of pyosalpinx. He recommended for the prostatitis rectal massage or irrigation, a most useful though difficult method.—A discussion followed, after which Mr. Edwards replied.

Reviews and Notices of Books.

The Life of Pasteur. By RENÉ VALLERY RADOT. Translated from the French by Mrs. R. L. DEVONSHIRE. London: Archibald Constable and Co., Limited. 1902. Two vols. Pp. 293 and 336. Price 32*s.*

"La Vie de Pasteur," by his son-in-law, M. René Vallery Radot, has been already recommended to the notice of readers of THE LANCET. It is in every way an admirable book. On its publication it was pointed out how very much the charm of the work depended on its literary style and a fear was expressed that a thoroughly satisfactory translation would be almost impossible. The difficulties which had to be overcome or evaded were numerous and great, and any reader who is familiar with the original work and inclined to be critical with the present one may not unfairly ask himself, "Could I have been more successful?" For our part we heartily welcome the present translation of the Life of Pasteur. It will be of use in affording to thousands of English readers an opportunity of becoming acquainted with the history of a great man and of a good citizen. Those who know him only by his scientific work will see that he was something more than a man of the laboratory and will understand in some measure why it was that he was so devotedly loved by his intimate friends. The fact that he placed the interests of his country before those of his own personal aggrandisement was very forcibly shown when he freely gave the results of his work without payment. It was, in his opinion, derogatory to a *savant* to become rich in such a way. It was a high ideal to hold in a mercenary age. Huxley estimated that Pasteur's researches on the disease of silkworms saved to France a sum exceeding in amount the indemnity which she had to pay to the Germans after the war of 1870. His delicate appreciation of character and his tolerance with religious views entirely different to his own are shown in Pasteur's relations with Littré who was formerly the chief exponent of Positivism in France and who is perhaps best known in England as the compiler of a great dictionary. The brief account given by Pasteur of the home life of this remarkable man is of the greatest interest. It shows Littré the philosopher and the original thinker living a quiet life and employing his few spare moments in cultivating his garden whilst quoting Horace and Virgil. In his literary work he was helped by his wife and his daughter, both good Catholics whose faith he respected. A crucifix hung in their working room and Littré knew too well, he said, what were the sufferings and difficulties of human life to wish to deprive anyone of the convictions which comforted them. It was as an outcome of this visit that Pasteur was led to give his opinion of Positivism and of the one thing lacking which he found in it. Positivism suggests altruism—a subordination of personality to sociability, it inspires patriotism and the love of humanity, but it does not take into account the most important of positive notions—that of the Infinite; and he who proclaims the existence of the Infinite—and none can avoid it—sums up in that affirmation more of the supernatural than is to be found in all the miracles of all the religions, for the notion of the Infinite presents a double character—it not only forces itself upon us, but it still remains incomprehensible. It is this humble and mystic spirit which so profoundly affected the life and work of Pasteur.

The book will be received with general interest; it is infinitely superior to the majority of biographies. No medical man who has the leisure should fail to read it. Those who have followed the advances made in science and in medicine which took place during the latter half of the last century will be pleasantly reminded of some of the most striking of the discoveries which were made during a very remarkable period and they will see exactly how the improvements were brought about and what a violent fight is usually necessary before it is possible to firmly establish one new fact in any domain of science. It is not necessary here to recall to mind the work done by Pasteur in connexion with crystallography and fermentation or the effects of his teaching on the long-vexed question of spontaneous generation, nor is it necessary to prove either that he was the means of revolutionising surgical dressing or that his researches on the attenuation of the virus of specific diseases have inaugurated a new epoch in medical practice. That his name would have been great had he done only one of these things is beyond cavil. He was, in fact, a genius.

A very great charm of the book is the way in which what may be called the minor characters are drawn. The work is so well done that the sketches, though slight, are veritable portraits—the work of a master hand. Pasteur's father is a case in point. We seem to know him and to love him—a man of determination, with a happy wit, kind, and genial.

Biot, the chemist, is another example. Many biographies are inordinately dull; this one is not. A man with little time for reading may find the book too long, but even for the busiest of men it is worth looking through, and no intelligent person with leisure would wish to shorten the book by a single page.

It would not be true to say that the translation of Mrs. R. L. Devonshire is not susceptible of improvement, and it would be easy to point out a number of cases in which some verbal alteration might with advantage be adopted. Such criticism is never difficult, but it is not always fair. It must suffice to say that the book as it stands is a very readable one. It contains a few brief and well-written explanatory notes which will be found of great service. There is a full, well-arranged, and excellent index of no less than 20 pages; the original book, it may be remembered, suffered from the lack of one. It is to be regretted that no complete bibliography of Pasteur's works and papers has been added, but it was scarcely to be hoped that a work involving such a great amount of research should be published as an appendix to an English translation of a book which was itself deficient in this respect. The portrait of Pasteur which appears on the frontispiece, although taken from the same source, is greatly inferior to the one which appeared in the original work and which was produced by Porcabeuf. The book is well printed and of light weight, and for the latter reason is much more convenient to read than is the original work.

Surgical Diseases of the Kidney and Ureter, including Injuries, Malformations, and Misplacements. By HENRY MORRIS, M.A., M.B. Lond., F.R.C.S. Eng., Vice-President and Chairman of the Court of Examiners of the Royal College of Surgeons of England; Senior Surgeon to the Middlesex Hospital, &c. With two Coloured Plates and upwards of 200 Engravings. London: Cassell and Co. In two volumes, Vol. I., pp. 682; Vol. II., pp. 670. 1901. Price two guineas.

WE may say at once that this work is the most complete, the most thorough, and the most satisfactory of any treatise on the surgery of the kidney and ureter with which we are acquainted. In 1884 Mr. Morris published a manual on the "Surgical Diseases of the Kidney," a little volume which met with the success which it deserved. At that date the published material on which to found a treatise on renal surgery was extremely scanty, but as the years have passed by the amount of literature bearing on this subject has steadily increased. At first Mr. Morris attempted to have abstracts prepared of every article connected with the subject appearing in this and other countries, but the labour has become increasingly arduous owing to the very large number of contributions relating to renal surgery. Mr. Morris has, however, pursued the same plan so far as was necessary to keep abreast with the advance of this branch of surgery, and the result of all this labour we have before us. The work naturally divides itself into two parts; the first, dealing with the kidney, is based on the manual published in 1884, while the second, treating of the surgery of the ureter, is entirely new.

The importance of a knowledge of the regional anatomy of the kidney is recognised by the author, who has devoted a chapter to it. A very useful diagram in this chapter is one from a dissection by Professor Arthur Robinson showing the relation of structures behind the kidney and in the ilio-costal space. A most important section is that dealing with the abnormalities of the organ, and the 65 pages which it occupies are none too many to describe the numerous anomalies to which the kidney is subject. There is certainly no other organ of equal importance which has a tithe of the varieties met with in the kidney. The author divides them into the three groups of abnormalities of position, form, and number. Nowadays operations on the kidney are of such frequent occurrence that malformations of the kidney are of great clinical importance. As Mr. Morris points out, they are of importance—firstly, because malformed kidneys are frequently the result of fusion of the two kidneys; secondly, because a malformed kidney is generally misplaced; and thirdly, because when a misplaced kidney is also misshapen the difficulty of diagnosing the nature of this "abdominal tumour" is greatly increased and the danger of the adoption of harmful treatment is much enhanced, and he quotes a case reported by Durham where a man for four or five years was rendered miserable by a failure to recognise a misplaced and misshapen left kidney. Yet, if these cases of malformed kidney be important, still more important are the cases in which only one kidney is met with, for disastrous results will follow if nephrectomy is performed. Mr. Morris estimated from a consideration of nearly 16,000 necropsies that the proportion of cases in which congenital absence of one kidney is to be looked for is once in 2650 cases. A horseshoe kidney occurs about once in every 1000 bodies. The probability, therefore, of the congenital absence of one kidney is by no means great, but we have to add to this the likelihood of atrophy having occurred through disease.

Many times absence of both kidneys has been noticed in stillborn children, and Dr. Polk has recorded a case in which a young woman lived nearly 12 days after being deprived of her only kidney; but the author quotes a case recorded by Vieusseux of Geneva, in which a girl, 11 years of age, had suppression of urine for 17 months, followed by re-establishment of the flow of urine. This case must be extremely doubtful, and it is much more probable that the child was malingering.

Of late years much attention has been devoted to moveable and floating kidney. As Mr. Morris points out, these two terms are not used with the same meaning by all who use them; he considers that they should be employed with a strictly clinical meaning. If the natural movements of the kidney simply become exaggerated Mr. Morris calls it "moveable," while a "floating" kidney, whether it is provided with a mesonephron or not, "moves freely forwards so as to rise or 'float' towards the anterior abdominal wall," both vertically and laterally. As to treatment, the author considers a belt or bandage to be useful, but he points out that great care has to be taken that the kidney is replaced before the belt is applied, and he cites a case where a lady wore a belt with ease and comfort while she was under his daily supervision, but when the patient passed out of his care severe renal crises occurred, necessitating prolonged chloroformisation, yet this lady was completely cured by nephropexy. The operation of nephropexy is described in the second volume, and of all the methods referred to Mr. Morris prefers, as a rule, to attach "the kidney by means of three sutures dipped deeply into the posterior surface of the organ and running for from three-quarters of an inch to an inch in its substance." He considers silk to be the best material and he has had up to the present 57 cases of this operation without a death.

Space will not permit a detailed examination of every chapter of this valuable work, but we may refer to a few points which we have specially noted. "Urinary fever" is of great interest (both theoretical and clinical) to the surgeon, and a full discussion of this difficult subject comes well within the scope of the work. The frequency of this condition may be gauged by the fact that Guyon found that urinary fever occurred in one-sixth of a large number of cases of simple dilatation of the urethra by a bougie. The author considers that a large proportion of these cases depend upon infection, but that others cannot at present be

attributed to this cause and that in many of these the nervous element plays the chief part.

Another important subject that is very fully treated is hydronephrosis. Mr. Morris considers that this condition is congenital in about one-third of the cases, and of the acquired variety the vast majority are due to malignant disease of the pelvic organs, especially of the uterus. The author quotes an instance of a hydronephrosis containing 30 gallons of liquid. The best site for puncture of a hydronephrosis Mr. Morris considers to be, for the left kidney, immediately anterior to the last intercostal space. On the right side this point is too high, as the liver would be perforated, so a spot is advised halfway between the last rib and the crest of the ilium and between two inches and two and a half inches behind the anterior superior iliac spine.

A large portion of the second volume is occupied by an account of the operations on the kidney. For total nephrectomy, for nephro-lithotomy, and nephrotomy Mr. Morris employs an incision four and a half inches long parallel with, and three-quarters of an inch below, the last rib. Should more room be required a vertical incision is superadded which may run upwards or downwards from the first, starting about an inch in front of its hinder extremity. Occasionally, especially for a large pyonephrosis, the author removes the last rib.

The chapters on Renal Calculus and on Calculous Anuria are especially good. The value of surgical interference for the latter condition is even now not fully appreciated by the profession, and a perusal of this chapter should do much to assist the treatment of these cases which are so amenable to surgical interference.

The last 370 pages of the second volume are devoted to the surgery of the ureter. Though renal surgery is of recent growth, yet still more modern is ureteral surgery, for it is less than 20 years old. The abnormalities of the ureter are very numerous, and one of the most interesting of these is the ending of a ureter in the urethra, the vagina, or even the rectum. Another curious condition met with is an obstruction of a ureter by compression by an abnormal renal artery or vein. The value of ureteral catheterisation is very differently estimated by different observers. Mr. Morris considers that in some cases valuable information may be obtained by this method, but that since the information it affords is not trustworthy and it exposes the patient to very definite risks the routine employment of ureteral catheterisation is most undesirable, and he condemns it emphatically as a mode of treating hydronephrosis or pyonephrosis or ureteral stenosis.

The important operation of ureteral anastomosis is very fully treated. Several different methods have been devised and employed for this purpose. The author considers that Van Hook's method of lateral anastomosis is on the whole the best, but when there has been much loss of ureter, then Bovée's operation of oblique end-to-end anastomosis is preferable.

The book contains a vast amount of information but it is thoroughly digested and therefore the work is very readable; a very complete index is appended.

Mr. Morris had at first intended to give a bibliographical list at the end of each subject, but as he found that each of these lists would run into several pages of print he has simply given a list of the names of the authors referred to and quoted in the text. Though this list may be interesting as showing that more than 1000 authors have been cited, yet as merely the names of the writers are given without the titles of their works or articles it will be, we are afraid, of very little practical value.

We must conclude this lengthy notice of an excellent work by saying that it worthily represents the present state of our knowledge of an important subject.

Practical Histology. By J. N. LANGLEY, M.A., Sc.D., F.R.S., Fellow and Lecturer of Trinity College, Lecturer on Histology and Deputy Professor of Physiology in the University of Cambridge. London: Macmillan and Co. 1901. Pp. 340. Price 6*s*.

THE plan of this work must be familiar to the many generations of Cambridge students who have worked with the Practical Physiology and Histology of Professor Foster and Professor Langley. It is, indeed, composed in great part of the histological portions of that work together with the directions supplied to students in Professor Langley's practical histology classes. Much of the book has stood the test of some 20 years' use, while all the most valuable modern methods have from time to time been incorporated. In many respects the book is remarkable and the plan of treatment of the subject is original and very thorough. Anyone wishing to gain a knowledge of histology and of histological methods without the aid of any demonstrator would do better with this book than with any other with which we are acquainted. It combines the functions of the usual laboratory handbook with the comments of the demonstrator and the descriptions of the systematic treatise on histology. It is in this last respect that the book is weakest, and, indeed, the absence of any plates prevents it from being a complete substitute for a systematic treatise, but as the book is not intended to replace such works it is hardly fair to find fault with it on this ground. Preliminary chapters on the use of the microscope, exceedingly practical and written in non-technical language, and on the various methods of hardening, embedding, and section-cutting are followed by chapters giving directions for the systematic examination of the various tissues and organs, with descriptions not only of the methods employed but also of what is to be observed in the preparations. The book is rich in cross references which are absolutely necessary in order that the fullest advantage may be taken of the instructions, though we must confess to a feeling of scepticism as to whether students will use them as they should. The methods for the examination of the central nervous system are very well and fully described, while the chapter on the Spinal Bulb is probably the best in the whole book. This chapter contains possibly the best description of this portion of the cord which has hitherto been published. Most works on histology skip this difficult subject entirely or allude to it in a most perfunctory manner, but here is a full and clear account of the bulb, such that a student with a knowledge of development who worked carefully through the various sections described could gain an intelligent and accurate knowledge of the subject. We know of no other book of which this could be said. We, of course, expect a good book from Professor Langley, and there is no doubt that the present work is excellent. The printing and type are, as usual with the publishers of this book, most satisfactory.

Allgemeine Physiologie: Ein Grundriss der Lehre vom Leben. (General Physiology: An Outline of the Science of Life.) By MAX VERWORN, Professor of Physiology in the University of Göttingen. With 295 Illustrations. Third Revised Edition. Jena: Gustav Fischer. 1901. Pp. 631. Price, unbound 15*s*. or half-bound 17*s*.

THE first edition of this new philosophical outline of the phenomena of life was published in 1894. A second edition was called for in 1897 and was ably translated into English by Dr. Frederic Lee, the Professor of Physiology in Columbia University, and published by Messrs. Macmillan. The present third German edition has undergone revision and some new matter has been introduced, but the author, whilst keeping recent work in view, has evidently endeavoured to avoid any material increase in the size of the volume.

The object of Professor Verworn's treatise is to give, not

a minute and special account of any one organ or system of organs or of any special function, but a picture of the general phenomena of life, and especially a description of those processes which appear in their simplest form in the cell, and consequently in the lower animals, and which gradually attain complexity in the higher. He therefore dwells at considerable length on the properties of protoplasm, on the phenomena of metabolism in protoplasm and in the various forms of cells, on the phenomena of transformation of energy as exemplified in the effects of the exposure of cells to chemical agents, light and heat, and on the elimination of energy in the cell as exemplified by motion, growth, and the evolution of heat, light, and electricity.

The question early and naturally presents itself, How did life commence upon this globe? and Professor Verworn, whilst giving the hypothesis of Haeckel, Pflüger, and others, with which he is in evident sympathy, that the earth in cooling from a state of incandescence gave origin to cyanogen compounds which have various points of contact with protoplasm, has not overlooked the essay of Mr. F. J. Allen who, in an interesting article contributed to the Proceedings of the Birmingham Natural History Society, maintained that as the earth cooled easily decomposable compounds were contained in the air and were dissolved in the waters; that, for example, discharges of lightning generated ammonia and the oxides of nitrogen, which were absorbed and precipitated by rain. These uniting with the chlorides, sulphates, and phosphates of the alkalies and alkaline earths afforded an opportunity for nitrogen to form various combinations with them and with oxygen, the transference of oxygen from the free to the combined state being probably effected, as at the present time in the blood, through the instrumentality of iron.

The mechanism of absorption and secretion, it is pointed out, are intimately connected with the processes of diffusion and osmosis, and a new section is here introduced to elucidate the phenomena of defecation. The recent experiments of Rhumbler have shown that a solid substance can first be taken up by a drop of fluid and then can be eliminated, for if a drop of chloroform and water be brought into contact with a slender glass rod coated with a thin in layer of shellac the chloroform (in which shellac is soluble) in the fluid rises round the rod, just as a bacterium is ingested by a leucocyte or as a thread of an alga is engulfed by an amœba. Gradually the shellac is removed from the glass rod by the solvent action of the chloroform, but pure glass is repelled by chloroform in water, consequently the drop separates itself from, or in other words expels, the glass rod just as the amœba discharges the indigestible remains of the alga.

This reference to a solitary phenomenon in inorganic nature as affording an explanation of the almost universal process of defecation in living beings seems somewhat strained, for considering the variety of substances which we consume as food some of the intestinal cells must have many likes and others many dislikes or we should never take up new materials or get rid of the old.

The investigations of Nernst into the physical conditions that exist when solid bodies are dissolved in fluids are considered. Nernst showed that the molecules of the soluble body move with a certain velocity in the solvent, striking against each other and against the walls of the vessel and rebounding, thus producing the so-called osmotic pressure. The result of this is a tendency to disintegration, a continuous change in the disposition of the atoms or groups of atoms, which again leads to the evolution of electricity and so to the discharges of the torpedo and the electric eel.

The section on ferments has been, as compared with the last edition, extended, the researches of Emil Fischer and of E. Buchner being introduced. The relation between the ferment molecule and the compound on which it acts, says Fischer, closely resembles that between a lock and key, for only that key which is made for the lock will open it and will only open that particular lock. This adaptation is so exact in the case of the enzymes that they will not act on even the isomeric compounds of a given substance. Emulsin, for example, the enzyme that is contained in bitter almonds, is only capable of splitting up the β-methyl-glycoside, but will not decompose the α-methyl-glycoside, the molecules of which, though identical in number with the former, have a different arrangement; on the other hand, maltase can only break up the α-methyl-glycoside and has no action on the isomeric β-compound. Buchner's experiments have modified the old view that the disintegration of the grape sugar molecule into alcohol and carbonic acid gas is due to the metabolism of, and in, the cell itself, for he has obtained a juice by pressure which contains no yeast cells and yet for a short period possesses strong fermentative powers.

The observations of Winkler showing that the extract of spermatozoa completely freed from spermatozoa will occasion sufficient excitation to induce development up to a certain stage in the ovum of the echinus are noted, as well as those of Schaudinn on the alternation of generations in coccidia. The chapter on Death is thoughtful and original. No satisfactory explanation of that very constant phenomenon can as yet be given. Professor Verworn does not accept the view of Weismann that the Protista are immortal, basing his objection on Maupas's observations which show that although multiplication by division may go on for a long time and through many successive generations, yet that ultimately death invariably takes place unless sexual fertilisation occurs.

In the chapter on Stimuli and their Actions Professor Verworn places before the reader an interesting account of the effects of thermal, chemical, electrical, mechanical, and photic stimuli on the lower organisms, and the work closes with an attempt to give a theory of the mechanism of life. It is possible that with improved chemical knowledge we shall be able to follow the processes of integration and disintegration in the cells of which the body and its organs are composed, but it must be confessed that many hiatuses exist in our present knowledge and that as yet we can but dimly see the succession of changes that take place in those dead compounds which we ingest as food and which as they pass through the body after forming part of its living structure are again cast out as dead material. Professor Verworn has produced an extremely interesting book, and we can only wish him sufficiently long life to see many of his suggestive ideas demonstrated to be facts.

LIBRARY TABLE.

Diet in Relation to Age and Activity, with Hints concerning Habits Conducive to Longevity. By Sir HENRY THOMPSON, Bart., F.R.C.S. Eng., M.B. Lond. London: Frederick Warne and Co. 1901. Small 8vo, pp. 126. Price 2*s.* 6*d.*—This is a second and enlarged edition of a work (published in 1886 when the author was 65 years of age) which consisted of the first part only of the present book; the second part, newly written, in the author's eighty-second year, has been added as the result of much additional experience of life and a stronger conviction of the truth of what was set down 15 years ago. As a frontispiece there is a portrait of the author at 80 years of age and a glance thereat will show his readers that he has evidently practised what he preaches and that he has attained a healthy and vigorous old age. We may be sure that, even though we may differ sometimes in opinion from the views expressed in this last publication, they are the result of a wide and ripe experience and years of close observation. Nothing has been set down in haste or without due consideration. The strict vegetarians find no unqualified support of their

tenets here, and as regards the *quasi*-vegetarians who, while assuming an air of mild superiority over those who eat "animal food in its grosser forms," do not scruple to consume the choicest and most concentrated of animal foods—eggs, milk, butter, and cheese—the author has nothing but contempt for their pretences. In fact, he is averse to any dogmatic limiting of selection of foods and drinks. In passing, he expresses a conviction of the absence of necessity for alcohol as a beverage. He refers to the cruelty of stuffing geese to procure *pâté de foie gras* for the gourmet, and recommends the Anti-Vivisection Society to turn its attention to this matter. Sir Henry Thompson deprecates increased eating as a means of keeping up the strength of those who are advancing in years, and particularly objects to the repeated and general use of concentrated forms of animal nourishment for the aged. Over-nourishment in old age is apt to lead to pains and aches due to impairment of excretion, and a long-protracted course of hyper-nutrition will end in an attack of gout. Even artificial teeth are not to be considered an unmixed blessing, for by a provision of Nature the teeth begin to decay and become useless just when the system begins to thrive without much animal food of coarse fibre. Teeth are not objected to from an æsthetic point of view, however. Indigestion, says Sir Henry Thompson, is mostly not a disease, but an admonition. "It is the language of the stomach, and is mostly an unknown tongue to those who are addressed." It means that the individual has not yet found his appropriate diet. "There is no food whatever which is wholesome in itself. That food only is wholesome which is so to the individual." The second part of the book is full of excellent advice for our old folks. The author, more emphatically than ever, insists that "the quantity of food taken is to be gradually diminished in proportion to decreased activity of body and mind." There follow details of the kind of life that all elderly people should lead. The subject of their dietetics is skilfully handled, and details of exercise and recreation are carefully discussed. The book is not one for medical men alone: it is not at all technical, and may be read with much advantage by everyone who has attained the age of 50 years and wishes to reach the ninth decade in fair health and activity.

Public Health and Housing. By JOHN F. J. SYKES, M.D., D.Sc. Edin., medical officer of health of St. Pancras, &c. London: P. S. King and Son. 1901. 8vo, pp. 216. Price 5s.—Of the publishing of books nowadays on the subjects of public health and hygiene, there seems to be no end; good, bad, and indifferent, original works and mere compilations—their name is Legion. Few, however, have as good a *raison d'être* as this little work by Dr. Sykes, the well-known and able medical officer of health of St. Pancras. The book is well bound, the print is large and clear, and the general arrangement of the letter-press is excellent. It is, moreover, full of tables of statistics and diagrams, all useful to the up-to-date medical officer of health, wherever he may live. The author points out first that our methods of housing ourselves in large cities are undergoing a change. Owing to the influx of people from country to town and from central city to peripheral suburbs, the population, ever-increasing, is housing itself in flats, boarding-houses, hotels, subdivided villas, and tenements more than ever. Now, the statutes provide already by-laws regulating overcrowding, cubic feet of air, amount of light, and so on, but these by-laws at the present day, according to the author, require to be reconsidered and their standards altered "more in consonance with physiological requirements than with the mere packing together of human beings." It is obvious that a deterioration of the health of any class, rich or poor, reacts detrimentally on all the other classes, and that the housing question exerts a powerful influence on the health and vigour of people generally; public health is influenced, in fact, "not only by overcrowding and misusage of houses, but also by the construction and arrangement of dwellings." The author deals with known effects of certain conditions of life, e.g., the effect of the density of population or of certain types of dwellings, on mortality. "Back-to-back houses show an excess in mortality from all causes," as do stable-dwellings, but not in the same proportion. A large part of the book is devoted to the consideration of direction, aspect, and width of streets, and heights of houses and their influence on the public weal and to the arrangements of dwelling interiors, their ventilation and lighting included. The author, considering the fact that *anyone* may design and build, or have built, a house for the accommodation of many or of few, is of opinion that more regulation and control of the builders' economies of light and space ought to be exercised by the public authorities. He also thinks that certificates of efficient drainage of newly-built dwellings of every description should be required in addition to the certificate of water-supply which is already and always exacted. The way of life in those ordinary houses which have been converted into "floor-lettings" without adaptation is deplorable. At the end of the book are appendices of regulations, by-laws, and definitions. We heartily recommend the work to all thoughtful medical men and more especially to those who are engaged in public health work.

Kitchen Physic. By W. T. FERNIE, M.D. Durh. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. Pp. 596. Price 6s.—Dr. Fernie has managed to cram into this comparatively small book many curious and agreeable facts, much as he would like to have a kitchen filled with pleasant and beneficial herbs and spices. His aim has been to supply a systematic description of culinary methods and results, associating the materials and artifices of the kitchen with the maladies and classes of malady for which they may be most profitably employed. Not only, however, has the author gathered together a vast amount of material learning with regard to properties and uses of herbs and meats, but he has embellished his knowledge by setting it out with a pleasant trimming of allusions and quotations that give his book an unusual charm. The book is no hurried effort; it is a full, quiet, and scholarly work wherein a medical man may find useful hints in an auxiliary branch of his art too often ignored or neglected. No practitioner underrates the importance of diet; few can enter into details of its constitution and preparation. For all who would enlarge their knowledge or skill in such matters Dr. Fernie has provided a rich store of reference and information.

The Care of the Consumptive. By CHARLES FOX GARDINER, M.D., Fellow of the New York Academy of Medicine; Member of the American Climatological Association. New York and London: G. P. Putnam's Sons (the Knickerbocker Press). 1900. Small 8vo. Pp. 182.—This little book is intended for the reading of nurses, of those who have the care of consumptives, and of the patients themselves. It is a common-sense and non-technical explanation of pulmonary phthisis and an advertisement of the sanatoriums of Colorado State and of the town in which the author is practising. This town is situated at an altitude of 6000 feet and is the health resort of numerous Americans every year. The author, while expatiating on the glorious climate of Colorado and on its virtues in the treatment of consumption, warns intending visitors "not to expect to get well in six weeks," and quotes that "a change of climate must not be expected to produce its full effect in less than two years." A chapter is devoted to the dieting of consumptives and no one who reads the book will fail to be struck with the great difference between the author's methods and those employed at Nordrach and other

continental sanatoriums. But Dr. Gardiner does not appear to expect to cure his phthisical patients in a comparatively short time. The author points out that it is probable that "very many people have consumption and that the disease is arrested before there are any symptoms marked enough to notice. ..... It has been stated that from 50 to 60 per cent. of civilised people probably are tubercular or have been so at some time in their lives," though their illness was perhaps not recognised for what it was. Writing of infection the author states as follows: "I think it is a mistake to think that consumption hits one like a bullet in a battle because the germs are flying around thickly and one is under fire, as it were. The probability is that all are hit and only those who are in a bad condition physically develop the disease, while those in good condition do not, the good and bad conditions being only terms to express an idea of cell resistance and not the actual appearance of people, their feelings of good or ill-health, &c." It will be seen that although the literary merit of this little book may be open to criticism, at all events it is easy to read and full of sound common sense. There is a description of the author's idea of how an invalid's day should be spent and the remarks on exercise therein form a valuable piece of advice. There is also a detailed account of the method in vogue at Nordrach, written by a former patient of Dr. Otto Walther. On the treatment of hæmoptysis the author writes: "The general panic that ensues sometimes when the invalid has lost a little blood is deplorable; often the whole house is in an uproar; ..... the room is close and hot, and any remedy ..... such as salt on the tongue, ergot, &c., all of which are useless, will be immediately tried. The mental agitation induced ..... is to the patient really much more injurious than being actually neglected. ..... The first thing to do is to send quietly for the doctor ..... to cheer and reassure the patient. ....." With all this most medical men will heartily agree. With regard to the hypodermic use of ergot it may be pointed out that in the recently published exhaustive work edited by Dr. Hale White on Pharmacology and Therapeutics we read that theoretically "ergot is scarcely likely to benefit a condition like hæmoptysis, inasmuch as the drug distinctly raises the pulmonary blood-pressure." The last 50 pages of the book deal with the cost of living in Colorado and the manners and customs of social life there. For those to whom money is an object there seems to be little to recommend a sojourn in Colorado, and English consumptives need not go so far away. In fact, those who are well informed in matters relating to the open-air cure of phthisis are looking forward to the time when we may confidently undertake the cure of our consumptives in any climate except those of the great cities.

Surgeons and their Wonderful Discoveries: Stories of Chloroform, of the Invaluable Antiseptic Treatment, the Finsen Light. By F. M. HOLMES, author of "Chemists and their Wonders," "Engineers and their Triumphs," &c. London: S. W. Partridge and Co. 1901. Pp. 160. Price 1*s.* 6*d.*—This little book is written for the public rather than for the medical profession, but, as is not always the case where an uncritical audience is being addressed, the information given is accurate as well as interesting. The title, for example, states truly the contents of the book. We are introduced to the development of modern surgery and not to those miraculous stories that we from time to time quote, chiefly from American sources, of eyeballs which have been removed, cleaned, and put back; of seven children at a birth; of fasting men and entranced women, to quote instances of "wonderful discoveries" which the lay press loves to dilate upon. Mr. Holmes describes the discovery and surgical application of chloroform, the invaluable developments that followed upon Lister's work, the use of the Roentgen rays, Finsen's light treatment of lupus, and so on, and has produced a sober record of modern surgical achievement, the examples that he has chosen well illustrating his prefatory statement that "everywhere surgery, like engineering, seems on the alert to win constant triumphs of enterprise and skill." We do not often recommend that a book dealing with medical topics should be placed in lay hands, but we think that the public would be in a better position to appreciate what is really done for them nowadays by modern surgery if they read Mr. Holmes's little book. The introduction of a certain amount of names is inevitable inasmuch as actual cases are not infrequently given in proof of the general statements made, but nowhere is any fulsome recommendation of a particular practitioner to be found.

JOURNALS AND MAGAZINES.

Journal of Pathology and Bacteriology.—The November number completes Volume VII. and affords a good example of a record of the work that is being done by English-speaking pathologists. It is sometimes stated that little pathology is at present being done outside France and Germany, but we have here ample evidence that the most varied work is being carried on and that our pathologists, young and old, are taking every opportunity of extending their work and experience and that they are producing results of permanent value. The number opens with an excellent article by Dr. E. W. Ainley Walker, Radcliffe Travelling Fellow of the University of Oxford, who writes on the Production and Specific Treatment of Typhoid Infection in Animals. He maintains that anti-typhoid serum is a specific protective agent and that it is certainly much more powerful than Jez's extract of tissues from animals inoculated with the typhoid bacillus. This serum is not only protective but curative to a marked degree: "a disease can be prodced in animals closely similar to the typhoid fever of man, and the injection of anti-typhoid serum can prevent the development and fatal termination of this disease in rabbits." Malvoz's theory that the agglutinins of the blood of immunised animals are neither more nor less than bodies formed in the normal growth of the bacteria in their culture media is discussed and rejected. Dr. William G. Savage (Bristol) contributes an article on Pseudo-Clumping in Cultures of the Typhoid Bacillus in which he argues that in broth there are substances which are capable of causing agglutination in particularly susceptible races of the typhoid bacillus and that the peculiar differences observed in the agglutination of different races of the typhoid bacillus are probably ephemeral and acquired and are partially dependent on the natural clumping power of the broth. Dr. W. D'Este Emery (Birmingham) makes a contribution to the Pathology of Ringworm, especially in relation to the chemical action of the products of microsporon Audouini. As the result of a series of very inteersting experiments he comes to the conclusion that the ringworm fungus acts in two ways—first and chiefly by the splitting apart of the component fibres of the hair and by the pressure exerted on the shaft and bulb; secondly, chemically by means of a toxin which induces some inflammation of the hair follicle. Some observations on tuberculosis of the cervical and bronchial glands by Dr. Hugh Walsham will be of special interest at the present time to those who maintain that the tubercle bacillus or its involution forms is always found in scrofulous glands. Dr. Walsham describes the phases through which the bacillus passes when held in these glands and describes the histological changes produced in these positions. This paper is very well illustrated. Dr. J. C. Muir, in an article on the Condition of the Blood and Marrow in Chronic Arsenical Poisoning, with Special Reference to the Occurrence of Cutaneous Pigmentation, contributes the results of some work carried out under Professor Sheridan Delépine, who has made the

question of blood pigmentation one specially his own. The work was carried out during the outbreak of arsenical beer poisoning in Manchester, and the results arrived at throw some doubt on the view generally accepted that pigmentation is due to the destruction of hæmoglobin or red cells. Not only is the skin an important factor in the production of hæmoglobin but the erythroblastic function of the marrow is more easily stimulated in the presence of a large store of cutaneous melania. Dr. Joseph Griffiths records a case of Fibro-cystic Tumour of the Breast in which the majority of the cysts were lined by stratified epidermis-like cells. This paper is illustrated and is of considerable interest in regard to the transitional nature of epithelium in different positions. Dr. William Whitridge Williams of Baltimore records a case of Sacciform Aneurysm of the Descending Aorta projecting into and occluding the Left Bronchus. He points out the important part which such an obstruction plays in determining tuberculosis and other diseases set up by specific organisms. Dr. F. M. Sandwith of Cairo gives an interesting account of Three Fatal Cases of Pellagra with Examination of the Spinal Cords. Working with Dr. F. E. Batten, he believes that the sclerosis of the posterior columns is essentially a chronic process, that it is of root origin, and that the increase of connective tissue in the posterior columns is secondary to the degeneration of the roots. Dr. Henry F. Bellamy gives a most interesting and well-illustrated account of the myeloid tumour of tendon sheaths—a condition perfectly distinct from the ordinary sarcomatous myeloid tumour. He considers that this form of growth is due to the proliferation of the endothelial cells of the blood-vessels and that it must be looked upon as a myeloid endothelioma. An appreciative notice of the late Dr. Walter Myers, who lost his life whilst studying yellow fever at Parà, completes this number of the journal.

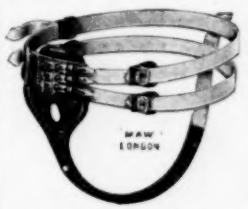
The Veterinary Journal.—The November number of this journal is always of considerable interest, as the introductory addresses delivered at the various veterinary colleges are then reported in full and we have an opportunity of observing the work, the hopes, and the anticipations of those who are engaged in studying and teaching veterinary medicine and surgery. There is evidently a feeling that in some way or other the veterinary profession should participate in the advantages for special study now being offered by the universities, both those of ancient date and those of more recent foundation. There is certainly every reason that there should be a closer coöperation between the veterinary schools and the universities, and that those who wish to undertake the more scientific part of the profession should be encouraged to carry on some part of their early study under specially qualified teachers. Professor D. J. Hamilton of Aberdeen University, while protesting against being thought "a mere visionary and optimist hoping for things that are impracticable," asks, "Why is it that, while our universities grant degrees to practitioners of human medicine, to those following arts and science, and so on, as yet you have not claimed an equal right for comparative medicine?" and Professor James M'Call quotes an opinion of Dr. Allen Thomson, late professor of anatomy in Glasgow University, to the effect that "the day would come when the Government of the country would see it to be to the benefit of all concerned to affiliate the veterinary colleges to the universities of the country." Two interesting papers, one by Professor Baumgarten on the Relations between Grapes (ox) and Tuberculosis (man), and the second by Professor Sheridan Delépine on the Communicability of Human Tuberculosis to Cattle, are here reprinted, the one from the *Berliner Klinische Wochenschrift*, the other from our columns. Other papers and abstracts make up a very interesting number.

Journal of the Association of Military Surgeons of the United States. Edited by JAMES EVELYN PILCHER. Vol. X. No. 1. Carlisle, Pennsylvania: The Association of Military Surgeons. August, 1901. Five dollars per annum in advance. —This publication does not call for any extended notice on our part. The Spanish-American war has created a new era in American military medicine, and one of the main objects of this journal is, in addition to publishing the proceedings and papers read at the meetings of the association, to diffuse information about, and invite coöperation with, the work done and doing in this respect in the United States and elsewhere. A considerable portion of the journal is, of course, taken up with the constitution and by-laws of the association, the names of the officers, reports of committees, and a nominal list of the members of the association, and brief memoirs of such as have died, and so forth. This part is followed by the president's annual address and the papers read, with the discussions thereon, at the last annual meeting of the association held this year at the capital of the State of Minnesota. This latter portion is worth reading, especially the pages containing observations about army rations in China and the tropics, abdominal gunshot wounds, cases of brain injury, and the articles on hospital equipment for field service.

New Inventions.

THE "TREXOPHYTON" TRUSS.

THIS truss for inguinal hernia, which is made by Messrs. Maw, Son, and Sons, 7-12, Aldersgate-street, London, E.C., has been devised by Colonel Day, R.A.M.C., and he has employed it on many occasions for soldiers in the field with very satisfactory results. The truss consists of a triangular leather pad which lies over the hypogastrium extending outwards laterally so as to press over the whole of the inguinal canals. The triangle lies with the base upwards and from the extremities of this base straps pass round the waist. The pad is divided vertically into two halves, connected at the upper part by three small straps while below is a circular aperture which surrounds the root of the penis and scrotum; below this at the apex of the triangle is a band which is fastened at its extremity to the waistbands. We have had an opportunity of trying one form of this truss on a very troublesome double inguinal hernia which had defied all the ordinary trusses and we were much pleased with the result.



A padded waistbelt would probably be more comfortable than the simple leather strap provided.

The mode of adjustment is shown in the figure, and is effected as follows. The testicles and penis are passed through the circular aperture and the straps of the longitudinal division are buckled. By simply encasing the hernia this truss acts like a second skin, and instead of pressing into one particular spot gives uniform support over the whole abdominal wall. The truss is very comfortable to wear, and after using it for a few days patients state that they do not feel that they have it on. Also, after some weeks' use the hernia does not come down at all readily. In two cases in which the inventor has tried it the hernia has not recurred. While wearing this truss a man can kneel, jump, ride, and perform gymnastic exercises. This instrument has been found most acceptable to the working-man and to every one whose occupation renders stooping, kneeling, or lifting necessary. The ordinary truss impedes all these exercises and especially walking. Many patients say that after putting on the Trexophyton truss they have had a long walk with comfort. No. 2 "Trexophyton" truss is said to be a great improvement on the original one, which was too cumbrous and is only used now for cases which have been neglected. The specimen submitted to us appears to us to have been of the earlier form.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 30, 1901.

The Ideal Direct Representative.

THE seventy-second session of the General Council of Medical Education and Registration commenced its sittings on Tuesday last, and the proceedings, as already reported in our columns, promise to be full of interest, while there is one circumstance of the present session which lends particular importance to the deliberations. In the course of a few days we shall be in the throes of the election of Direct Representatives of the medical profession for England (including Wales) and Scotland upon the General Medical Council, so that the proceedings of the Council will be watched with more than usual keenness by those of our readers who have near their hearts the interests of their profession. They will take note of how the work of the Council is done and also of the part played by the Direct Representatives. For they will have to make up their minds how far the definition of the duties of the Council which has hitherto been accepted, at any rate by a large majority of the members, is right and sufficiently comprehensive. There has been for some time a growing feeling that the work of the General Medical Council has not been satisfactory, that time has been spent in discussing and re-discussing matters of minor importance, while subjects affecting the relations of the general practitioner to the public have received insufficient attention. The doings of the Council at the present session should be strictly scrutinised to see how far this feeling is based upon facts; how far the Direct Representatives of the profession take a wide view of their responsibilities; how far they assist by the judicious voice which gains adherents the general business of the session: and how far their presence is responsible for a better understanding by the Council of the needs of the medical profession as a whole. The system of direct representation, about the value of which in good hands we have no doubt, is to some extent upon its trial when three new representatives out of five are about to be chosen.

We have before now taken upon ourselves the responsibility of indicating to the medical profession which of several candidates should be chosen as their Direct Representatives on the General Medical Council; and, looking back upon what we have said, and reconsidering the work and *personnel* of the gentlemen who have been chosen, we have a gratifying feeling that we have always given sound advice. We do not, however, propose on this occasion to pick out any candidates as better than, or inferior to, their rivals. There is really nothing to choose, as far as we can see, between the gentlemen before the constituencies. Apparently all of them have made up their minds to have nothing to do with the registration of midwives, while some of them have arrived at this opinion after being concerned in the drafting of Parliamentary Bills or schemes of one sort or another for the registration of midwives. Most or all of them desire to promote the amendment of the Medical Acts in directions which would curtail the present licence of quackery, while several have done work in certain directions of reform which have been indicated for years in our columns and in those of our medical contemporaries. We do not wrong the candidates by saying that we can scarcely consider any of them ideal as Direct Representatives upon the General Medical Council of the whole medical profession. And if we attempt to draw a picture of the ideal direct representative our readers will understand that we do so without intending our remarks to have personal application, but only desiring to illustrate in an obvious way our conception of the principles of direct representation and our high hopes for its accomplishments in favourable conditions. Firstly, then, a direct representative should, in our opinion, be a general practitioner, although Mr. VICTOR HORSLEY, whose original candidature we espoused warmly and whose presence on the Council has been justified over and over again, happens to be a consulting surgeon. When Mr. HORSLEY was elected to the Council no general practitioner opposed him; while he was in actual occupation, if we remember right, of the chairman's seat at the Medical Defence Union, a position giving him an intimate knowledge of the ins-and-outs of the general practitioner's life. Mr. HORSLEY'S election is not in question at the present moment, and when it becomes so he will find us cognisant of the value of his services and of his acquaintance with the practical problems of the medical career. Our ideal candidate should, then, be a general practitioner and one of influence in his district. We do not think that it much matters whether he resides in London or not, for the constituency which the Direct Representatives stand for is so large that it is ridiculous to consider that five candidates, however widely scattered their places of residence, can reproduce at the Council any territorial expression of feeling. The ideal direct representative should be a man of sound general and medical education, while, in our view, he should also be a man of culture. Neither the forcible democrat nor the windy altruist can serve the purposes of the profession at the council board of the General Medical Council. More than a conviction of being in the front rank of reform is required: a logical mind and a gift of expression are necessary. For the Direct Representatives in many questions will find themselves pitted against the representatives of the old universities and corporations, some of whom will have spent their lives in an environment calculated to make of them instructed and urbane debaters. The direct representative must be able to take his part in dialectics with the same good taste. He must, in fact, be able to meet his fellow-members of the Council, whose academic studies may, perhaps, have gone further than his own in many directions, on equal terms. That such a man would also be a reasonable man is most likely. Still, it must be insisted that a direct representative must be an essentially reasonable man. Knowing at first hand what are the grievances of general practice, he should be able to discriminate between those which arise from causes that cannot be dealt with by the General Medical Council and those the removal

of which is practicable; and he should not rest until he has in his mind a scheme whereby such removal might be effected. But he should recognise that most useful reforms come somewhat gradually, and when he finds himself in a position to take a large stride forward he should not look upon his predecessors as having been silly or timid because they did not lead the way. There are two things that go to make an acrobat—his own agility and his spring-board. The useful reformer appreciates the fact that those whom he succeeds are his spring-board. What though they appear stationary, without them he could throw no somersaults. The model direct representative will also know how to rate himself. He will remember that he is one of a group of five persons swamped in a body of 32, but raised to a position of dignity because he has an enormous constituency to represent. He is not a delegate, but he is not sent to the Council to air his own views. His individuality should have full play, but he must be energetic in behalf of the medical profession and not in behalf of his own importance—which importance, as far as the Council is concerned, arises from the trust which his professional brethren have reposed in him.

Where, it may be asked, can such a man be found? Hardly TRIERMAIN required more of his bride. But fortunately it is not necessary to find him. It is only necessary to find men possessing certain of the ideal qualities, with aspirations towards others, so that the group of five Direct Representatives should more or less make up the perfect representative between them. When this position is reached direct representation may be of prime value to the medical profession. All direct representatives should be adaptable men, not pusillanimous or timid, but ready to compare views with each other and to yield small points here and small details there, if only a common constructive policy can be hammered out between them. Having once sat upon the Council together it should be impossible for them to write to the medical or lay press, or to address meetings of their constituents, with the purpose of pointing out that SHORT is the friend and not CODLIN. Five direct representatives not in harmony with each other and having no common cause of action are not likely to make any deep or lasting impression upon the General Medical Council; and if, after being returned to the Council together, they, presumably with the same mandate, are seen belittling each other, their influence is at once much lessened. That individual direct representatives have rendered sterling service in different directions upon the General Medical Council THE LANCET has been quick to recognise; but their work has too often recently been rendered ineffective by their having no common programme and, apparently, no respect for each other. Five direct representatives working unselfishly towards a common end and steadily recording, perhaps, after a few judicious words from the mouth of the one or two of them best qualified to speak, a solid vote in favour of practicable reforms would, in our opinion, defy all arithmetic and count for at least 50 on a division. Then, and only then, the weighty numbers of their constituency would be felt, for the General Medical Council will never desire to thwart the clear wishes categorically expressed of the whole medical profession.

The Prevention of Water-borne Diseases in the Army.

IN spite of our great advances in sanitation, and of the fact that the unseen bacillary enemy is as real and as disaster-bearing as the human foe, no effectual means have yet been taken to protect our troops from water-borne diseases. The difficulties of placing in the hands of mobile forces of men a means of expeditiously and effectively rendering a suspicious water free from the seeds of disease are, of course, great. The possibilities of the laboratory, or even of the home, can only be faintly realised, if realised at all, in a campaign. We still are uncertain as to the most practicable way by which infected water can be rendered rapidly and truly innocent. Not that we do not know how water can be sterilised and the potentialities of the disease-producing germs contained in it destroyed, for there are many ways of effecting this; but the question as to which of these is the most trustworthy amid the difficulties of transport and the mobilisation of troops under every conceivable condition of a thousand climatic variations as yet has not received a completely satisfactory answer. An answer, however, that must command attention has been furnished by a remarkable lecture which was delivered on Nov. 12th at the Royal United Service Institution and published in our issue of Nov. 16th (p. 1360). In this lecture Dr. H. E. LEIGH CANNEY urges the adoption of sterilisation by heating, employing petroleum as transportable fuel for the purpose, and he proposes the appointment of a "water section" of men, amounting in number to 2 per cent. of strength, and recruited for intelligence and trustworthiness, to supervise the process. To this section Dr. LEIGH CANNEY would confide the duties of providing their corps or unit with "approved" water and guarding it against all the water-borne avenues of typhoid fever. He assumes that sterilisation by heat is the most practicable and least liable to errors in method and that it requires less expert skill than a filtration or a chemical process. Concerning this opinion we have a few words to say; but while we think it right to be critical we should like to see Dr. LEIGH CANNEY'S scheme tried. The results of practical experience would form the best criticism.

That sterilisation by heat is the most effectual way of rendering dangerous water harmless is of course accepted, assuming that there is no difficulty in regard to the transport of fuel, which in this case Dr. LEIGH CANNEY proposes should be petroleum. He says nothing about quality, whether it is to be a light or a heavy oil, or of a high or low flash point, which are factors of some importance where transport and storage are concerned. Apart from these considerations the raising of a large volume of water to a relatively high temperature is a laborious proceeding, and even when effected, the energy so imparted, though it has done its sterilising work, has to be dissipated and wasted because the water has to be cooled before it can be drunk. This, of course, is all a consequence of the great thermal capacity or specific heat of water. Some idea of the enormous energy required to raise the temperature of water to boiling-point

may be gathered from the fact that the quantity of heat which raises a pound of water from 0° to 100° C. would suffice to raise a pound of iron from 0° to 900° C. Heat is, it must be admitted, a feeble and extravagant sterilising agent considering the actual energy involved in raising water to the sterilising degree, and when its source is a factor of importance in transport we are tempted to look around for less exacting arrangements. Could not the same destructive effect on organisms be obtained without casting such an incubus on transport? Need fuel be sought at all for the purpose? Manual energy and horse-power might be directed to the production of an electric current which could be employed either for sterilisation by heat, or more conveniently still by ozone. The latter is giving excellent results, we believe, on a large scale and a hand or horse dynamo would add little to the impedimenta of a mobile force. Machinery for the translation of man- or horse-power into electric or caloric energy is simple enough and a negligible load compared with fuel, even in the liquid form. With regard to other methods, confidence in the portable filter has been somewhat rudely shaken; it is worse than useless under a rough-and-ready environment. Purification by forced sedimentation is an effectual method of removing organisms from water, but it also imposes conditions which are likely to fail at the right moment. The addition of chemicals such as permanganate of potash, chlorine, or bisulphate of soda in quantities harmless to the consumer seems simple, but we are without any experience of the practicability or convenience of the method for rapidly-moving armies.

The main thing in favour of Dr. LEIGH CANNEY'S proposals being given practical trial, in spite of certain manifest objections to their easy working, is that they are clear, definite, and comprehensive. They go to the root of the matter in that they regard all causes, real and alleged, of epidemic disease in fighting armies as second in importance to contaminated water. The view that the typhoid fever of camps is not necessarily due to an impure water-supply, and to that factor alone, is held by many military sanitarians, and in MUNSON'S recent work[1] on military hygiene an account is given of the epidemics of typhoid fever in the camps of the American army during the Spanish-American War which clearly supports the opinion that other factors are frequently at work. It has been noticed in our own army that young troops and those who have recently arrived at a foreign station suffer more severely than the older and more seasoned soldiers from typhoid fever, and it is not unlikely that circumstances which have as yet escaped knowledge may possess a determining influence over the spread of typhoid fever and other epidemic diseases of armies. It may be nearly as important a thing for the health of a camp to attend, for example, to the disinfection and safe removal of all excretions as to look to the water-supply; but this must not be used as any argument against the value of Dr. LEIGH CANNEY'S suggestions. He attacks boldly one unquestioned source of mortality in all armies in the field, and his plan of procedure ought not to be lowly rated because other sources of mortality, the virulencies of which are not so clearly ascertainable, will still remain to be dealt with. In the teeth of the undoubted fact that heat is neither a convenient nor an economical sterilising agent, we should like to see practical trials made at once of Dr. LEIGH CANNEY'S "water section." If his scheme does not come out well under tests—if, for example, the amount of transport required and the time wasted in allowing the water to cool combine to make it useless for rapid marches—it will be time to look for some other method of purification. The Waterhouse-Forbes steriliser, in which also heat is the agent employed, is a very ingenious apparatus. It is being used, after considerable trial, in the United States army, and has been found the simplest and most portable method of supplying abundantly sterile and cooled water to troops.

[1] Theory and Practice of Military Hygiene, by Edward L. Munson, M.D., Captain Medical Department, United States Army. London: Baillière, Tindall, and Cox. 1901.

The Reformed Inebriate and His Future.

THE Home Secretary invited representative members of organisations formed for the rescue and reformation of the intemperate to a conference at the Home Office on Nov. 20th with a view to devise some scheme for the assistance of inebriates released on licence from reformatories. The circular issued by the Home Office stated that about 400 persons have been committed to certified inebriate reformatories under the Inebriates Act of 1898, and deplored the fact that many of these, after showing improvement, moral, mental, and physical, following upon their detention, must inevitably relapse as the result of the sudden transition from strict discipline to full liberty amidst prejudicial surroundings. The remedy suggested for this, on the recommendation of the Departmental Committee of 1898, is the help and encouragement that might be afforded by something in the nature of a half-way house between the reformatory and the outside world, some workers' home or agency where the reformed inebriate could obtain work or assistance in procuring it, where he could gradually draw any savings that he had accumulated, and where he could take refuge and again place himself under moral control in periods of temptation. The Home Secretary invited the conference and coöperation of philanthropic bodies with a view to the institution of these half-way houses, because he considers it obvious "that the managers of the reformatories cannot be expected to make this provision for their licensed inmates," of whom he went on to say that they "are drawn from all parts of the country and it is generally expedient that on release they should return to their former homes or the neighbourhood with which they are acquainted."

That it is eminently desirable that the inebriate once rescued should be maintained in safety none will deny, nor will any hesitate to affirm that it is in the old surroundings and among the old associates that witnessed his original downfall that his chief danger will lie, although it is only in the place where he is known that he is likely to have a good opportunity offered to him of redeeming his past. The inebriate who, before his final incarceration in a reformatory, has gradually sunk to a social sphere below that in which he was originally entitled to move may in some instances be

able to return to respectable friends who will welcome him back, take care of him as he should be taken care of, and afford him the help which he needs to enable him to begin life afresh. On the other hand, he may have no such friends, or his relatives and former acquaintances may have suffered so long and acutely by his misdeeds that they may be unwilling to receive him, or if they receive him may regard him with mistrust and apprehension and render his position unbearable by reminding him of his past. If the inmate of an inebriate reformatory released on licence finds that his relations are distrustful of him or are unwilling to receive him he will then be in the position of those who have no respectable relations, and who, if they go to familiar haunts at all, will go to those very haunts in which their final downfall took place and in which it was, perhaps, made easy and condoned. Those with whom they will associate in these circumstances may not be absolutely vicious; they may not themselves be noticeably intemperate or depraved; but they are extremely likely to belong to a class in which goodwill towards a former companion who has returned after a prolonged absence almost invariably manifests itself in pressing offers of alcoholic refreshment, and in which humour is apt to take the form of temptation offered to a person known to be prone to inebriety to become intoxicated. When the inmate of an inebriate reformatory finds himself released from its discipline and plunged into such surroundings as these, without any hand being stretched out to guide him and without any place or person near by to whom he may turn for help should he be conscious of his need for it, there can be but little hope of his reformed condition being maintained. The question, therefore, of the means by which the relapse to inebriety may be averted is a very important one if any good work of a permanent description is to be accomplished by inebriate reformatories. It is also a very difficult one, the difficulty consisting, not only in finding the best way of effecting the desired end, but also in finding the persons who will carry out the methods recommended.

With both these questions Sir KENELM DIGBY, on behalf of the Home Secretary, dwelt at considerable length in his introductory statement, and he pointed out that so far as the detention of the inebriate is concerned the provisions of the Inebriates Act of 1898 had been successfully carried out. He went on to say that the working of the Act, which was yet only in its experimental stage, had been facilitated by the Government as well as by local authorities, but that with the view of completing the scheme it was necessary that philanthropic agencies and individuals should come forward and supplement the efforts already made by finding work and funds and friendly supervision for those released on licence. Dr. FORMAN of the London County Council, Mr. HADEN CORSER, the metropolitan magistrate, Mrs. BRAMWELL BOOTH of the Salvation Army, Miss FORSYTH, and many other experienced workers, spoke in favour of this further development of the work, and we understand that the Home Office authorities had good reason to be satisfied with the success of the meeting. Many practical suggestions were made and we are informed that Dr. R. W. BRANTHWAITE, the medical inspector of inebriate reformatories at the Home Office, will be ready to lend a helping hand in all cases where benevolent institutions or individuals are prepared to offer accommodation or employment under the circumstances to which we have referred. We are anxious to point out that mere lodging accommodation, however kindly and however attractive, is by no means all that is required. To our mind the essential feature of this after-care management of the inebriate consists in providing definite work under firm and considerate supervision, with such opportunities for physical and mental recreation as are best calculated to confirm and strengthen the wholesomeness of the moral tone of the individual in his efforts to return to his proper social position in the community. For this purpose we think that the proffered help of such well-established and powerful agencies as the Salvation Army and the Church Army should be freely taken advantage of as being most likely to secure the objects in view. Medical men throughout the country are so conscious of the need for help at this critical juncture in the life of an inebriate that they may be relied upon for advice and assistance at all times.

The Situation at the Macclesfield Infirmary.

As we have already reported, the members of the honorary medical staff of the Macclesfield Infirmary have handed to the governors of that institution a unanimous resignation of their posts owing to the action of the governors in selecting, contrary to the advice of the staff, a female to fill one of the resident posts. The story is briefly as follows. At the end of October the medical staff received a communication from the secretary of the hospital inclosing the testimonials of three candidates for the then vacant post of junior house surgeon. Two of the candidates were females, and the medical staff, after carefully considering the applications, unanimously recommended the third, a man, as the only suitable person to fill the post. Notwithstanding this strong expression of opinion from the medical staff the house committee of the infirmary decided to send for all the candidates, but only the two ladies were able to appear before the governors, the gentleman who had received the support of the medical staff having been appointed during a rather lengthy interval to another post. The medical staff then proposed that no appointment should be made immediately and that the post should again be advertised as vacant, but the governors decided to elect one of the two female candidates, whereupon the medical staff resigned their posts, holding that this action of the governors was tantamount to a vote of want of confidence in them. The governors of the infirmary decided a week later to invite the medical staff to a conference at which the whole question might be discussed, but the conference, which was held on Tuesday last, resulted in no settlement, each side maintaining its position. And that is how the matter now, unfortunately, stands.

Two perfectly separate questions are here involved: the question of the advisability of appointing women to certain medical posts, and the question of the amount of confidence that should be reposed by the lay governors of a hospital in their honorary medical staff. In saying a few words in support of the attitude of the medical staff towards the first and less important of these two questions, we wish to

premise that we are not making light of the excellent work that has been done by medical women in all sorts of spheres. Times, and ourselves with them, have changed, and we agree with one of the governors of the Macclesfield Infirmary when he said at the conference between the governors and the medical staff that "the lady doctor has come to stay," and we absolutely repudiate the unworthy suggestion that the opposition to the appointment of women to certain resident posts in hospitals springs from the jealousy of their male *confrères*. The objection that the medical staff of the Macclesfield Infirmary have to the delegation of their patients to the care of a woman is one that is felt, and felt strongly, by medical men all over the kingdom, and it is one that we share. A hospital or an infirmary where emergency cases of all sorts occurring in either sex are admitted is not a place where a woman can replace a man, however much she can help him. Certain classes of patients—for example, men suffering from acute phimosis or from retention of urine as a concomitant of gonorrhœa—ought not to have their physical misery added to by being restricted to the ministrations of a woman. That nurses can and do most efficiently and discreetly help such patients we all know, but they do it upon the instruction of a medical man, and the situation is entirely different from that created if the patient has to tell his story to a female ear. Female patients, suffering in comparable ways, have the support of their sex in the nurses, though their medical advisers be men; it is manifestly wrong that the male patients should be placed at the cruel disadvantage of being compelled to confide in a woman. Granted that a female house surgeon, apart from those special directions where the value of her work is obvious, can discharge most of the duties that devolve upon the resident staff of a general hospital, we yet hold strongly that she cannot replace a man to whom it is natural to deal with all situations that may arise. If the governors of the Macclesfield Infirmary, having decided to ignore the inconveniences of putting a young man and a young woman to live together—inconveniences which are none the less real because for manifest reasons they are not much mentioned—had limited the work of the female junior house surgeon in such a way that a class of male sufferers could never be cut off from communication with the male medical officer, they would have had a better case as far as the appointment of a female junior house surgeon is concerned. As it is the view of the staff must commend itself to all who understand the working of a hospital.

But what about the position that has been created through the flouting by the governors of the advice tendered to them on request by the medical staff? This is a more serious matter. There is nothing so bad for the welfare of a hospital as the existence of a quarrel between those responsible for the medical care of the patients and those responsible for the lay management of the institution. Such civil wars upset the public confidence, re-act upon the patients, and bring bitterness into work the essential reasons of which are love and charity. We earnestly trust that the lay governors and the medical staff of the infirmary will come to an immediate settlement of their differences. The settlement might be made upon temporary terms, the ultimate arrangement to be arrived at by a specified time: but settlement of some sort there must be immediately or the work and reputation of the infirmary will suffer. We would suggest, much on the lines of a proposal already submitted by the medical staff, that for a short period the elected junior house surgeon should discharge the duties of the post with limitations, males suffering from venereal diseases and other similar patients being seen by her male superior officer—who will doubtless come to the assistance of the hospital with additional service. The honorary medical staff have offered to continue to attend the patients for a month. During that time the whole matter should be temperately threshed out, and to any arbitration committee that may be appointed we would tender one word of advice. They should make it a by-law of the hospital that the medical staff must be adequately represented on the house committee or committee of general management. At least two of the medical staff ought to sit regularly in counsel with the lay authorities. In this way the lay governors would get into proper touch with medical feeling and the medical staff would learn to appreciate the energies of their lay colleagues; medical opinions would no longer savour of dictation to lay ears, and lay misapprehensions would not exist under a better understanding of the medical standpoint. When this feeling of mutual confidence has been created no such troubles will again occur.

Annotations.

"Ne quid nimis."

THE REPORT OF THE DEPARTMENTAL COMMITTEE ON FOOD PRESERVATIVES.

THE long-awaited report of the Departmental Committee appointed to inquire into the use of preservatives and colouring matters in food has at length been published and a copy of it has reached our hands this week. It is only a few weeks since that we took occasion to complain that this report had not been published, although the committee had been appointed so far back as in July, 1899. The delay, however, appears to be justified by the thoroughness and comprehensiveness of the report now issued, and we regret that owing to the great pressure upon our space this week we cannot enter into it at that length which its importance demands. The report, together with the minutes of evidence, appendices, and index, occupies over 500 pages and we doubt whether the subject has ever been dealt with so exhaustively in this or any other country. We congratulate the committee upon the able manner in which they have weighed the evidence, and on the way in which they have crystallised out their conclusions based upon the enormous number of diversified opinions and facts with which they have been faced. We hope next week to deal more comprehensively with the report than it is possible to do in our present issue. Suffice it to say that the recommendations drawn up are very closely in line with the views which for many years we have expressed in our columns. More particularly we may note with much gratification that the terms of the recommendations coincide very closely with the principles laid down by THE LANCET Special Sanitary Commission on the Use of Antiseptics in Food, the report of which appeared in THE LANCET of Jan. 2nd, 1897, p. 56. The broad conclusions of that commission were that the practice of preserving food

with chemical substances should be subjected to control in regard to the amount and kind of preservative used, and that if any legislation were to be adopted it should be insisted that the seller must declare by label or in some other way the fact of a food containing such preservative. In a word, we urged that legislation should be directed against the abuse rather than against the use of preservatives. The recommendations which the Preservatives Committee have now drawn up after hearing the evidence of 78 witnesses, and after appointing a sub-committee to visit other countries, the inquiry having extended over two years, are practically identical with THE LANCET'S representations. Thus, the use of formaldehyde is to be forbidden entirely while salicylic acid is not to be used in a greater proportion than one grain per pint in liquid food and one grain per pound in solid food. The use of any preservative or colouring matter whatever in milk offered for sale is to be constituted an offence under the Sale of Food and Drugs Acts. It is to be lawful to use certain boron compounds in cream, but the amount is not to exceed 0·25 per cent. expressed as boric acid. (We see no gain in insisting, as is recommended in this clause, that the *amount* should be stated on the label.) The only preservative permitted to be used in butter is also boric acid or borax and the proportions are not to exceed 0·5 per cent. expressed as boric acid. No chemical preservatives whatever are permitted to be used in any dietetic preparation intended for the use of invalids or infants, while the use of copper salts in the so-called greening of preserved foods is prohibited, though to this recommendation one member of the committee demurs. Lastly, to provide against the introduction of new and possibly objectionable preservatives it is recommended that a separate court of reference should be established or a new obligation should be imposed upon the Local Government Board to exercise supervision over the use of preservatives and colouring matters in food, and to prepare schedules of such as may be considered inimical to the public health. As we have said, we hope to return to the subject more fully next week, although in the meantime we are glad to state that with the general trend of recommendations of the report we are in entire agreement, as will be gathered from the views expressed in our columns both before the committee were appointed and during the time of their deliberations.

THE CLOSED WINDOW.

THE absolute importance of a sufficient supply of pure air to all persons under all conditions is a subject upon which we never lose an opportunity of laying stress. We are glad, therefore, to add our support to the emphatic testimony of a correspondent who addressed the *Westminster Gazette* recently in a letter with the above heading. The gist of this gentleman's remarks was that he always slept with his bedroom window wide open, that in the daytime he was equally careful to be liberally supplied with fresh air, and that he used cold water freely. Now, there is not the slightest doubt that this doctrine, though perhaps carried to an extreme, is sound in foundation. "Colds," whatever their exact etiology, are commonly caught from sudden or prolonged exposure to temperature considerably lower than that usual at the time. Such exposure presumably lowers the resistance of the individual, and it does so mainly because his resistance is not habitually educated in the manner described by the writer whom we have quoted. A hardihood of the vaso-motor system, if not of the body generally, is certainly obtained by a healthy person who habitually exposes himself freely to fresh air and the daily test of a cold bath. We have pointed out recently the atmospheric iniquity of most public buildings, but in private life there is no excuse, except among the poorest, for deficient quantities of fresh air. Unless there are special reasons for the contrary every person should sleep with his bedroom window open, and copious supplies of air, if not of sunlight, too, should be constant visitors in his sitting-room, even though this looks upon a London street. Fresh air and sunlight are the great natural germicides. Medical men must constantly teach the public that if only these two are constantly sought they provide a prevention that will do away with the need for the cure now unhappily so often sought in vain in an open-air treatment. The open-air treatment is wanted in everyday life. It can be so largely introduced as to save thousands from the necessity of giving up their lives to curing the tuberculosis which they would never have contracted had they indulged earlier in free air. In an article on the "Degenerative Results of Deficient Ventilation" in the *Journal of Balneology and Climatology* the writer pleads for legislation to limit the minimum ventilation allowable in every assembling-place or habitation for human beings and for dairy cows and horses. The vast influence for evil—particularly in the matter of tuberculosis, anæmia, and colds, the forerunners of lung disease—that is exercised by deficient ventilation, places the matter on a level of importance sufficient to demand legislative interference. Legislation, though, is a slow remedy. Public opinion can in the meantime effect a vast improvement. There are always hundreds of eager enthusiasts waiting for a cue. They will seldom get one more worthy, never one less harmful, than the formation of an "open-window league." Such a body, formed for the propagation of sound principles of ventilation and hygienic atmospheric conditions, may confidently count upon the support of the medical profession. There are, however, we must admit, two great difficulties in the way of the always-open window, in London at any rate. The first is the noise, and the second the amount of dirt and soot in the air, which make everything in a room filthy unless the incoming air is filtered in some way.

"LES AVARIÉS."

WE recently alluded to certain medical plays which have appeared in France, and made mention of *Les Avariés*, the production of which has, we understand, been interdicted. M. Eugène Brieux describes *Les Avariés* as a play having for its subject a study of syphilis in its relation to marriage; the piece, he says, contains nothing of a nature to cause scandal and contains no obscene word. The play is divided into three parts. The first scene takes place in the consulting-room of a medical specialist who is called upon to advise a patient, "l'Avarié." M. l'Avarié, if for convenience he may be so called, is a young man who was about to make a successful marriage, a marriage indispensable from a worldly point of view, and otherwise desirable because he loves his fiancée. The preliminaries have been settled and the marriage contract is signed. Then M. l'Avarié, although rather a good young man (*pas coureur ni débauché*), has the misfortune to contract syphilis in the usual manner, whereupon he consults the physician and learns that for him to marry in his present condition will be a crime, the various ills which might affect his wife and children being duly pointed out to him. The physician comforts him by saying that in the course of three or four years a real cure can with care be effected. M. l'Avarié promises that he will not marry. At the beginning of the second Act it is discovered that M. l'Avarié has married the lady and they have a baby, aged some months. M. l'Avarié, to his credit it must be observed, had postponed the marriage for a time and has undergone some quack treatment which is credited with having caused the disappearance of the prominent symptoms of his malady. All goes well and the marriage is a success. M. l'Avarié's mother is extremely fond of her grandchild

and sees him as often as possible, for the child is out at nurse. Unexpectedly she returns with the nurse and the child, for the country doctor has ordered that wet nursing should be given up and that the child should be fed with a bottle. Then the grandmother, wishing to get at the root of the matter, consults a specialist who, as every experienced playgoer must expect, turns out to be our friend of the first Act. The doctor asks to see the father of the child and recognises his old patient. Madame l'Avarié has escaped infection but the child has not. The wet-nurse ought no longer to run the risk of danger. So says the physician. But the grandmother wishes the nurse to stay, otherwise the child might die. What matter if the nurse runs a risk? If she were infected they could pay her. However, the nurse chooses to go and demands her money, whereupon M. l'Avarié refuses to pay. Then the nurse, touched in her pocket, turns on him and tells him that she knew the nature of the illness and Madame l'Avarié overhears the end of the conversation. In the third Act a new character appears, the father of Madame l'Avarié, a "député." He is received at the hospital by the physician who presumes that he has come to get some information for use in the cause of hygiene. He has in reality come to obtain a certificate from the physician to enable him to sue for a divorce for his daughter who has returned to him. The physician declines. He also advises that the nature of the child's illness should be kept secret. A cure is possible. A public scandal can never be obliterated. He advises pardon, hope, and patience—patience for the present and hope for the future. So the play ends. That the scabrous theme of hereditary syphilis, which has already been used as a *motif* by Ibsen, is here treated by M. Brieux discreetly may be true, but the production of such work at a theatre cannot be recommended. The lessons in practical life and morals may all be sound and forcibly inculcated, but most people expect recreation and the creation of pleasant emotions at the theatre; they do not want instruction in the pathological sequelæ of venereal disease. We trust that the play will not get a public hearing.

THE PHYSIOLOGY OF THE ADRENALS.

Dr. Hans Strehl and Dr. Otto Weiss contribute an article to a recent number of Pflüger's *Archiv* which contains the results of their researches on the physiology of the suprarenal capsules on which they have been engaged for the last three years in the Physiological Institute of the University of Königsberg. They first occupied themselves with the question of the importance to life of these organs. Upon this point there has been much difference of opinion. Brown-Séquard in particular, who removed them entirely from the body, thought their presence was indispensable to life, since death was the invariable consequence of their removal. Subsequent experimenters, like Tizzoni and Nothnagel, opposed this statement, but in their method of operation the organ was not removed but only broken down *in situ*. Neither by Brown-Séquard nor by the above-named observers was any dissection made to determine the presence or absence of accessory adrenals. Dr. Strehl and Dr. Weiss find that such structures, the presence of which, of course, invalidated the results of both sets of observers, are to be found occasionally in rabbits; in two cases they were situated behind the vena cava and in another in the substance of the cortex of the kidney, whilst two of the size of a bean were discovered in a cat which had survived without apparent injury the removal of both adrenals. Their operations to determine the results of total extirpation were performed on dogs, cats, rabbits, guinea-pigs, rats, mice, a hedgehog, and a weasel, and upon frogs; for those made on rabbits, mice, and rats albinos were selected. The removal was usually effected by laparotomy in the linea alba, though occasionally through the back of the animal, the right adrenal being first removed on account of the greater technical difficulties attending the operation. Asepsis was carefully effected in every instance. Experiments were performed upon a number of other animals from which only one suprarenal capsule was removed. They were uniformly fatal in the case of guinea-pigs, but the other animals appeared to suffer little inconvenience except that two dogs and a cat became thinner. In the animals which died after removal of both adrenals the symptoms observed were great muscular weakness and apathy; the gait was vacillating, the legs straggled, and the head was depressed. The temperature slowly fell. The blood-pressure was found to be diminished to the extent of four or five millimetres of mercury after the removal of one adrenal, but when the second one was extirpated the blood-pressure at once fell 20 or 30 millimetres and continued to fall more slowly till death ensued. Transplantation of the adrenals even into parts that were highly vascular, like the substance of the liver or kidneys, was never successful. Dr. Strehl and Dr. Weiss point out the difficulty of determining with certainty the cause of death, some attributing it to loss of nerve-power, others to the adrenals secreting or producing a substance which, entering the blood, keeps up the blood-pressure, and others to the adrenals destroying some substance proceeding from the muscles or other tissues and accumulating in the blood after their removal which would otherwise exercise a deleterious influence on the blood-pressure. The experiments in favour of the last-named view are that animals die much sooner after ablation of the adrenals if their muscles have been previously tetanised; whilst the injection into frogs of the plasma of blood of warm-blooded animals from which the adrenals have been removed proves fatal, acting like curare in paralysing the end-organs of the motor-nerves generally. On the other hand, the researches of Oliver and Schäfer and other observers seem to show that some substance is formed by the adrenals the action of which is to maintain the blood-pressure.

BELATED HONOURS TO MEDICAL WORTHIES

AN Italian contributor writes from Florence, Nov. 22nd: "The Medical Congress which recently sat at Pisa wound up its proceedings by an impressive, if very tardy, acknowledgment of the obligations conferred on that seat of learning by the great anatomists and nature-students Andrea Vesalio and Andrea Cesalpino. The former, though not an Italian by birth, made Italy the scene of his most effective work, leaving on anatomy in all its departments the marks of true genius in research and of an expository power at once luminous, artistic, and fascinating. To commemorate these services a tablet inserted in the façade of the old Church of Our Lady of Snow (Santa Maria delle Nevi) opposite the University bears the following inscription:—

In questo edificio
fu l'anfiteatro anatomico
dello Studio Pisano
dove per primo insegnò
Andrea Vesalio
negli anni 1543-1545

Ottobre, 1901.

(In this edifice was the anatomical amphitheatre of the Pisan University, where for the first time Andreas Vesalius gave instructions in the years 1543-1545. October, 1901.) At the unveiling the Senatus Academicus, the students, and all the members of the Congress were present and the spokesman was Dr. Guglielmo Romiti who worthily holds the chair from which Vesalius taught. Professor Romiti gave a brilliant sketch of his illustrious predecessor's career, dwelling emphatically on the spirit of independence with which he investigated nature, even though it brought him

into collision with his own teachers and with the traditional science of the period. This ceremony concluded, the Congress shortly thereafter repaired to the hospital to assist at a similar function, the unveiling of a memorial tablet to Andrea Cesalpino, another light of the Pisan School, one of the most profound and most accomplished physicians of his time as well as an able and intrepid physiologist, who 'just missed anticipating Harvey in his epoch-making discovery of the circulation of the blood.' The inscription runs as follows:—

In questo luogo ove per lungo tempo di secoli furono le stanze anatomiche del Pisano Nosocomio è fama Andrea Cesalpino ricercasse nei cadaveri sedi e cause di morti e dopo di lui una pleiade di osservatori fra i quali Alfonso Borelli e Marcello Malpighi—qui al principio del secolo XIX s' incontrarono Giorgio Cuvier e Paolo Mascagni—E l'Accademia che dal gran Cesalpino prende nome a perpetuare memorie coi gloriose pose questa lapide.,

(In this place, where for a long time throughout the centuries were the anatomical rooms of the Pisan Hospital, Andrea Cesalpino is reputed to have sought in the human subject the seat and the causes of death, and after him a pleiad of nature-students, among them Alfonso Borelli and Marcello Malpighi; where also at the beginning of the nineteenth century George Cuvier and Paul Mascagni met; the Academy, which takes its name from the great Cesalpino, in order to perpetuate such glorious memories, has placed this stone.) The oration at the unveiling was delivered by Dr. Carlo Fedeli, professor extraordinary of medical pathology, well known in the balneological world as consultant to the thermal establishment organised by Government at Montecatini. Once more the spokesman proved worthy of the occasion, fitted as it was (for the younger portion of the audience particularly) 'not only to commemorate, but to inspire.'"

THE CARE OF THE INSANE.

EARLY in last September, at Hadsor, near Droitwich, a lady named MacDonnell, who had been recently confined in the Warneford Asylum—near Oxford, but had been released on trial a few days before, murdered her sister with whom she was staying and her sister's child, and committed suicide herself. At the inquest upon the bodies the coroner, in summing up to the jury, criticised unfavourably the manner in which the unfortunate lady had been allowed to leave the asylum, imputing a want of proper precaution to the authorities of the institution, who were not represented at the inquest, either as witnesses or otherwise. A report was sent in due course to the Commissioners in Lunacy by the committee of the asylum, and the Commissioners' reply to that report, we are glad to say, completely exonerates the Warneford Asylum from all blame. We have perused both documents and we fail to see how Dr. James Neil, the medical superintendent of the asylum, could have done otherwise than he did in releasing Miss MacDonnell and permitting her to return to her relative, who was anxious to receive her, while we do not see that there was any precaution that should have been recommended to the murdered sister or that there was any ground for any such recommendation, taking into consideration that all the circumstances of Miss MacDonnell's illness and detention were already known to her. Miss MacDonnell had been detained for more than nine months, and during that period had improved in health, slowly at first but more rapidly later, until she was able to enjoy the social amusements provided for the recovered inmates, and until finally she showed no mental symptoms at all except a slight occasional depression. All delusions had disappeared and she had expressed apparently sincere penitence for one or two determined attempts at suicide which she had made before her detention. An impulse to injure her sister in the early stages of her derangement had been noted, but during her residence in the asylum she had evinced no signs of this or of any homicidal tendency. In fact, in her conversation with regard to her sister and her little nephew she had always expressed warm affection for them and a desire to return to them, while her sister, as has been said, was anxious to have her with her. A brother who gave evidence at the inquest, in writing to Dr. Neil after the occurrence, expressed the opinion quoted in the report referred to, "I cannot conceive that anyone could have foreseen the existence of the homicidal mania"; and this gentleman, after waiting until Dr. Neil should fully sanction the provisional release of his sister, gave the necessary approval in writing of the course taken. In these circumstances we not only fail to see any cause for blaming the authorities of Warneford Asylum, but we are also unable to discover any means by which the patient could have been legally detained for a longer period or anything that pointed to the necessity, involving additional expense to the relatives, of keeping her after release under continued supervision by trained attendants, the only precaution which could have proved effective. In any case it appears to us to be a matter of regret that the coroner should not have confined himself to the subject of the inquiry before him, or if he thought the conduct of the asylum authorities germane to it that he should not have obtained their evidence before he indulged in censure. It is the duty of those who occupy judicial positions to keep as closely as possible to the issues and parties before them, and to hear both sides before giving vent to strong remarks which may do considerable injury to those who are made the subject of them, while those who utter them, owing to the privilege of their position, are free from all responsibility.

THE FACIAL OR SUPRA-ORBITAL REFLEX.

As the knowledge of the nervous system increases so more importance becomes attached to the presence or absence of any given reflex. At one time little diagnostic value was attached to the character of the knee-jerk; at a later date little attention was paid to the character of the plantar reflex; both these have now been shown to be of the greatest value in the diagnosis of affections of the nervous system. The presence of the facial reflex, sometimes known as the supra-orbital reflex, has of late attracted considerable attention. This reflex is produced by striking some part of the forehead and is followed by contraction of the orbicularis with more or less movement of the eyelids. In order to exclude the visual reflex the eye is kept gently closed. It is generally found that on tapping the frontal region a contraction of the orbicularis takes place on both sides. The path for this reflex passes centripetally through the fibres of the supra-orbital nerve to the sensory nucleus of the fifth nerve and thence to the nucleus of the upper branches of the seventh nerve on both sides. McCarthy, in the *Neurologisches Centralblatt*, says that he found this reflex present in 100 normal persons investigated. When exaggerated the reflex is obtainable by percussion on any portion of the supra-orbital nerve, but when diminished it can only be obtained by striking the nerve at its exit from the supra-orbital notch. This reflex was found to be absent on the left side in one case of cerebral syphilis in which the fifth nerve was affected whilst the seventh nerve was unaffected. In cases of facial paralysis the reflex was constantly absent, and in 25 cases of tabes it was diminished in 23 and absent in two. In a case of section of the supra-orbital nerve the reflex was absent. Some doubt has been expressed as to whether this is a true reflex, and Carl Hudsvernig, who investigated 1000 cases and found it present in all, expresses, in an article in the *Neurologisches Centralblatt*, the belief that it is an overflow of the muscular irritability to mechanical irritation into neighbouring muscles innervated by the

same nerve, and in support of such a view he quotes the case of a woman who had the right Gasserian ganglion removed for intractable neuralgia, and this contraction of the orbicularis was easily obtained on both sides. The fact that this muscular contraction is absent in facial paralysis is equally well explained by the view that it is an overflow from mechanical irritation of the muscle as by the view that the path for the reflex is interrupted on the centrifugal side. Bechterew also expresses the opinion that it is not a direct reflex from the branches of the supra-orbital nerve but an ordinary periosteal reflex. Little mention is made of the cases in which the reflex is increased; for instance, in tetany the facial irritability is generally ascribed to irritation of the facial nerve, but it would be equally reasonable to regard it as an increased reflex and would then accord with the increase of the other reflexes of the body which are present in tetany. Again, in cerebral diplegia the facial reflex is always marked in those cases in which the upper limbs and face are affected. Further observation is required not only to decide whether this is a true reflex or not, but also to show what significance may be drawn from its presence or absence.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Nov. 20th states that for the week ending Nov. 16th the only cases of plague which occurred were those of 2 natives at Port Elizabeth. The only deaths reported also occurred at Port Elizabeth, and were those of 2 natives. The area of infection remains unchanged. In persons under naval and military control 1 case occurred—namely, that of a native at the remount camp, Port Elizabeth. As regards Egypt, for the week ending Nov. 10th 2 cases and 1 death from plague have occurred throughout all Egypt. From Alexandria 1 case, that of a native, was reported, and from Ziftch 1 case and 1 death, also a native. Only 1 case of plague remains at present under treatment in Egypt—namely, the one admitted on Nov. 5th at Alexandria. As regards the Mauritius, a telegram from the Governor, received at the Colonial Office on Nov. 22nd, states that for the week ending Nov. 21st there were 67 cases of plague and 39 deaths.

THE DISINFECTION OF WATER-RECEPTACLES ON BOARD SHIP.

IN the *Archives de Médecine Navale* for October Dr. Lasserre of the French Navy advocates the cleansing and disinfection of water-receptacles on board ship by means of the flame of burning alcohol. Potassium permanganate is often used for the purpose, but in his opinion it is powerless against the germs of water-borne diseases, such as typhoid fever, dysentery, and cholera, and should more powerful chemical agents be employed they will probably prove injurious to the consumer. Dr. Lasserre's method of procedure is as follows. Having made a pad of compressed cotton-wool of about the size of an orange, he attaches it to some convenient metal rod to serve as a handle, and then steeps it in a vessel containing alcohol, thus converting it into a torch. Descending into the receptacle through the manhole he next applies the flame all over the inner surface, taking especial care that no angle or recess shall escape the action of the caloric. An assistant outside renews the alcohol as often as may be necessary, the amount required for a receptacle capable of containing two tons of water being about half a litre. The objections to the process, according to Dr. Lasserre, are threefold: risk of causing a fire, inconvenience from the high temperature, and danger of asphyxia by carbonic acid gas. A little prudence should, he thinks, suffice to neutralise the first of these objections, while the second and third can be obviated if the person operating is careful to keep his head near, or even entirely external to, the manhole. It is also a good plan to place a lighted taper on the floor of the receptacle, for the flame will serve as an index to the quantity of carbon dioxide that may be present. Should the taper go out the operator would do well to follow its example as quickly as he can. Dr. Lasserre adds that he himself has manipulated his *flambage* process on several occasions without experiencing anything more disagreeable than violent perspiration. As the vessel from which his communication is dated is on the Cochin-China station this behaviour on the part of his sudoriparous system is intelligible. It is also conceivable that, from the consumer's point of view, a fourth objection to the process might possibly be advanced, but happily sailors are seldom captious in such matters. Among the advantages attaching to *flambage* Dr. Lasserre observes, in conclusion, that disinfectants are occasionally unavailable, whereas "it is always easy to procure alcohol!"

SCIENCE FOR THE MULTITUDE.

IN a recently-delivered popular lecture Dr. John Aikman of Guernsey has supplied an example of dexterity in putting the leading ideas of technical questions into a form adapted to the comprehension of the average individual. Taking "Some Aspects of Life" as the title of his address Dr. Aikman discoursed in simple language and with homely illustrations on cytology, the morphological elements of the blood, the phenomena of oxygen absorption and oxidation of the tissues, phagocytosis, diapedesis, inflammation, necrosis, chemotaxis, pathogenic organisms, microbial toxins, epithelial transplantation and proliferation, nerve force, and the theory of vibration, mechanical and molecular. These various subjects, which were of necessity presented in a highly diluted form, were interspersed with much poetical quotation, showing both literary ability on the part of the speaker and a fine faculty of "adaptation to environment."

CASES OF BORIC-ACID POISONING.

DR. J. F. RINEHART records in the *Therapeutic Gazette* for October two cases of poisoning by boric acid and refers to the scarcity of literature on the subject. An insidious and probably unnoticed form of such poisoning may take place through the consumption of foods "preserved" with boric acid. As was recorded in our columns last week, a shrimp-dealer at Morecambe was fined £20 and £5 costs at Lancaster for selling three pints of Dutch shrimps "containing 95 grains (per pound) of borax used as a preservative." The cases recorded by Dr. Rinehart had characteristic symptoms following the administration of boric acid as a drug. The first case was that of a man, aged 38 years, who was suffering from a posterior urethritis. He was treated with five-grain doses of boric acid every four hours to be taken by the mouth. Local treatment was employed with a weak solution of nitrate of silver. After two or three days he complained of extreme weakness and a vesicular eruption appeared on the back of his hands and between the fingers. The pulse was very weak but not accelerated. These symptoms passed away upon stopping the administration of the boric acid but returned when the use of the drug was resumed. Dr. Rinehart believes that had the use of the boric acid been persisted in the patient would have died. The second case was that of a man, aged 50 years, who had a suprapubic lithotomy performed on him. The bladder was washed out daily after the operation with a saturated solution of boric acid and five grains of the drug were given by the mouth every four hours. On the tenth day a rash of an erythematous nature appeared around the wound and in the lower part of the abdomen. Scales and crusts formed on the skin of the affected areas and the underlying cutis was thickened and

infiltrated as in eczema. The use of the boric acid was discontinued, and the eruption slowly disappeared, but on resuming the drug the rash re-appeared two days later. In this case the symptoms of depression and cardiac weakness were very marked, almost tending to collapse. There was slight albuminuria and at the height of the eruption the bodily temperature rose one or two degrees. Dr. Rinehart refers to two fatal cases quoted by Dr. H. C. Wood in his text-book of Therapeutics, in which the symptoms of poisoning by boric acid were nausea, vomiting and hiccough, an erythematous rash, fall of temperature, and a state of collapse ending in death, the mind remaining clear almost to the end. He concludes that "the use of boric acid as a preservative of food should be prohibited by law, as the poisonous effects of any quantity sufficient to preserve food would appear to be proven."

CHEMISTRY OF NERVE-TISSUE.

A RECENT number of the *Comptes Rendus* (No. 6, Tome ii., 1901) contains an article by M. N. Alberto Barbieri on an analysis which he has made of the fresh brain of the ox. The brain freed from blood is triturated with three times its weight of distilled water and pressed through a cloth. A very fine and homogeneous emulsion is thus obtained, which is heated in a sand bath at 45° C. for half an hour or 40 minutes. When cool it is treated with ether in a vessel of moderate size, which has a stopcock at its lower part, and is allowed to remain at rest for 24 hours. It then exhibits two layers—an upper layer of grey colour and an inferior white layer. The inferior layer is drawn off, whilst the upper layer is exhausted with ether in the same vessel until the ether remains colourless. Three groups of substances are thus obtained—namely, those which are soluble in ether, those which are soluble in ether and water, and those insoluble in these neutral fluids. The first group he clears of ether by evaporation and slightly saponifies the residue with a solution of potash in alcohol. The soap is again treated with ether, which leaves undissolved a brownish substance very rich in sulphur and phosphorus, probably consisting of nucleins. The portion dissolved in the ether is filtered and the soap is dissolved in distilled water. By filtration cholesterin, which melts at 145° C., is separated. The alcoholic liquor is now rendered feebly acid by hydrochloric acid and some common salt is added which precipitates the fatty acids. From the molten lye rendered alkaline by lime an aromatic body is obtained by distillation which has not yet been isolated, but which is soluble in alcohol and ether and is capable of combining with alkalies. The nucleins above mentioned are neutralised and slightly acidified with hydrochloric acid: treated with boiling alcohol they become soft and viscous, and without dissolving yield cerebrin. From the second group, after treatment with strong alcohol and sodium chloride, he obtains a precipitate of two globulins, and after filtration and addition of pure potash alkali globulin. The alkaline solution after being again filtered and distilled yields a ptomaine, an aromatic substance, a body intermediate between leucine and butalanine and volatile fatty acids. The latter he believes to be pre-existent normal products. On drying the globulins and exhausting them with alcohol in order to remove the cerebrin, the nucleins combined with fats are obtained together with a colouring matter, and aromatic substances, one of which resembles fish brine in smell. From the third group dried at 100° C. and exhausted with boiling alcohol he obtains cerebrin in large quantity and a body named nomocerebrin, which is gelatinous, refracts light strongly, and swells in water and alcohol. By further treatment of this group with alkali, chloroform, and acetone an oily substance crystallising in white needles fusible at 138° C., and becoming red by contact with sulphuric acid (erythro-cholesterin?) can be separated. By treatment with sulphuric acid, precipitation of the acid with baryta and addition of alcohol, an albuminoid, probably proteose, is isolated, and, finally, by boiling with a solution of soda and addition of alcohol, keratin alone is left.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE KING has intimated his pleasure that the Prince of Wales's Hospital Fund for London, established by His Majesty when Prince of Wales, shall in the future be known as "King Edward's Hospital Fund for London"; and that the change of name shall not come into effect until Jan. 1st, 1902.

THE PREVENTION OF TUBERCULOSIS.

IN a report which has been adopted by the Chelsea Borough Council Dr. Louis C. Parkes draws attention in an able manner to the causes which promote the spread of tuberculosis and suggests measures which might be adopted to combat the disease. He quotes statistics to show that in Chelsea there has been a gradual decline in the mortality due to tuberculosis during the past 20 years and ascribes this reduction to the abatement of overcrowding, the better conditions of cleanliness now prevailing in the houses of the working-classes, and the better ventilation of rooms and workshops. The want of proper disposal of sputa, however, is a great source of danger to the community, and this can only be overcome by the education of those affected with the disease, and the responsibility for this lies mainly with the medical practitioner who should never fail to give patients the necessary precautions as to the use of spittoons and handkerchiefs. Dr. Parkes maintains that if any great advance is to be made in the prevention of tuberculosis it will be necessary to provide means by which those who are suffering from pulmonary tuberculosis and are unable through poverty or the nature of their homes to carry out the necessary precautions may be isolated in specially constructed sanatoriums for the treatment of this disease. He further urges that to be a success any scheme for the isolation and open-air treatment of consumptives in sanatoriums should be carried out on a large scale and should be independent of the Poor-law. He is of opinion that in London the proper body to provide such sanatorium treatment is the Metropolitan Asylums Board. Dr. Parkes argues that the principle involved in the isolation and treatment of consumptives in sanatoriums is the same as that involved in the isolation and treatment of scarlet fever, diphtheria, and enteric fever, and that it is a measure necessary to safeguard the public health. He points out, quite correctly, that the general hospitals in London are averse to the reception of consumptive patients for any but short periods, and also (with which statement we quite agree) that such patients as a rule are not benefited by a stay in those hospitals. He also says that the special hospitals for consumption in London are too few to be able to deal with any but comparatively small numbers of such cases and that there is often a long period of delay after application before a patient is admitted. Unfortunately, much of the above is only too true. Pulmonary tuberculosis is such a widely spread disease that to attempt to cope with it by the sanatorium method would be such an enormous task that any municipal authority might well shrink from the undertaking. This objection would be added to if, as Dr. Parkes suggests, in the case of the wage-earners of a family a fund should be made available for the maintenance of their families throughout the somewhat prolonged period of some six months during which, on an average, treatment is desirable. As the frequent appeals to the

charitable only too plainly demonstrate, great difficulty is experienced in maintaining the hospitals that already exist; and the tax-payer although he is a long-suffering individual, would resent the very heavy addition to the rates that such a scheme as the one suggested by Dr. Parkes would entail. It is true that the great majority of the wage-earning classes, and even the classes slightly above them, are unable to carry out in their own homes the necessary precautions in anything like an effective manner; and, as Dr. Parkes again rightly remarks, if others are dependent on them, adults afflicted with consumption continue their work so long as their health and strength permit and are a constant source of danger to their fellow workers. The whole subject is one beset with difficulties, but we cannot place ourselves in accord with Dr. Parkes's suggestions. We would suggest that certain modifications should be made in the Poor-laws and in the arrangements of the existing infirmaries whereby cases of pulmonary tuberculosis could be suitably treated. We would further remind Dr. Parkes that certain of the special hospitals for diseases of the chest are constructing (or are about to do so) branch hospitals in the country for the "open-air treatment," and we do not therefore feel ourselves justified in recommending the adoption of this proposal that new sanatoriums should be built under the control of the Metropolitan Asylums Board.

ST. LUKE AS A SURGEON.

THE Revised Version of the Greek Testament has more than justified itself, but who would have expected from so accomplished a scholar as Mr. Augustine Birrell, K.C., a fresh illustration of its need? Such, however, is the fact—all the more surprising that he was quoting from "the beloved physician" who stands first of the Synoptists in point of literature, whose Gospel, in fact, is designated by that consummate critic Renan as "*le plus beau livre qu'il y ait.*" Speaking at Epsom on Nov. 20th on the all-absorbing question of the hour Mr. Birrell is reported to have said: "Our first duty will be to bring back thousands and tens of thousands of Boer prisoners and restore them to their farms. It would be an expensive work pouring oil and wine into the gaping wounds of war." To pour any such mixture "into" any such lesion would be "expensive" indeed! But what does St. Luke, who knew his business, represent as the practice of the Good Samaritan—a practice which he includes in his general praise of the benevolent act? "He bound up his wounds, pouring 'on,' not 'in' (*ἐπιχέων* not *ἐγχέων*), oil and wine." In other words, as the Good Samaritan applied the bandage he kept pouring oil upon it to keep it soft and prevent it from stiffening, while adding wine to stimulate the anæmic condition of the parts. Such were the therapeutics of the time—therapeutics (as we know from Galen) recognised as orthodox more than a century later, when, indeed, a paste combining the two liquids was a popular pharmaceutical preparation. Mr. Birrell, and many, we fear, besides himself, would be none the worse for reading "Some Lessons of the Revised Version of the New Testament"[1] by the great Cambridge theologian and exemplary bishop, the late Dr. Brooke Foss Westcott. There he will find an anecdote which, besides illustrating the need for a Revised Version, has a special interest for every medical man—for everyone, in fact, who makes the human frame the object of his reverential study and care. "Archbishop Whately," says Dr. Westcott, "in his last illness begged a friend to read to him St. Paul's description of the Christian's hope as he looks 'for the Saviour, the Lord Jesus Christ, who shall change' (so the friend read from the Authorised Version) '*our vile body*, that it may be fashioned like unto His glorious body.' 'No, no,' interrupted the Archbishop, 'give his own words. He never called God's work *vile*.'" "And so now we read, 'who shall fashion anew the body of our humiliation, that it may be conformed to the body of His glory.' (Phil. iii. 21)."

[1] Hodder and Stoughton, third edition, 1898.

SMALL-POX IN LONDON.

ON Saturday, Nov. 23rd, and on Sunday, Nov. 24th, the number of fresh cases of small-pox notified and removed was 22; on Monday, Nov. 25th, there were 13 fresh cases; on Tuesday, Nov. 26th, there were 21 fresh cases; and on Wednesday, Nov. 27th, there were 16 fresh cases.

A CASE OF ANOMIA AND PARAPHASIA WITH A FOCAL LESION.

DR. GEORGE H. THOMAS reports in the *Boston Medical and Surgical Journal* of Oct. 31st a case of peculiar interest, firstly because of its rarity, and, in the second place, because it adds a little more to our knowledge of the cerebral localisation of that form of aphasia known as anomia—i.e., the inability to recall the names of objects. The literature of the subject comprises two cases reported by Dr. Graeme Hammond,[1] one by Dr. Edwin Jack,[2] and an earlier one reported by Professor C. K. Mills of Philadelphia,[3] four cases in all. Reference to the subject of anomia in a case of cerebral hæmorrhage has already been made in these columns.[4] The present case is that of a man, aged 60 years, a lawyer. He was a healthy person, the father of several children, and free from syphilis and alcoholic habits. A few months before his present illness he had headaches "for the first time in his life," and on one occasion acted very strangely to his wife, "using profane language to her which he afterwards entirely forgot." He had always been a man of refined sensibility and fond of his wife. The headaches were diffuse but they were most marked on the left side of the head, and eventually they became more severe and persisted day and night. On consulting his physician in November, 1900, the latter observed that the patient "acted strangely and had a noticeable difficulty in finding words to express himself. ..... On entering the [physician's] office the patient went to the stove, where a hot fire was burning, and stretching out his hands asked if there was a fire in the stove. The question was repeated several times by the patient," although the answer was each time in the affirmative. This and the headache and some difficulty of speech were the only symptoms. He was prescribed a sedative and slept slightly better on the following night. Next day he had to draw up several legal documents, which on examination were found to be carefully and correctly written. Later he called to see the physician, and in conversation he mentioned that gentleman's name several times, "but when asked directly to repeat the name he was unable to do so. Several attempts to repeat the name of his law partner failed completely. The doctor gave the names of a number of neighbouring lawyers, to all of which he shook his head and evinced much annoyance that his memory was so poor." After admission to the hospital these symptoms continued. His tongue became coated and dry, the breath was offensive, the pulse was weak and somewhat rapid (90 per minute), but the temperature was normal. The headaches persisted and he looked "worried and anxious, and his appearance was that of one suffering from sepsis." Vision, pupils, and optic discs were normal. There were no motor or sensory disturbances of the body. The knee-jerks were sluggish. Marked tenderness was present over the left mastoid region

[1] Medical Record, Dec. 9th, 1900.
[2] Boston Medical and Surgical Journal, Dec. 6th, 1900.
[3] Journal of Nervous and Mental Disease, 1895.
[4] THE LANCET, Feb. 24th, 1900, p. 552.

and a fœtid otorrhœa was observed together with deafness in the left ear. He "replaced one word for another, as in the use of adjectives," in speaking (paraphasia), but could read aloud without mistakes, understood written and spoken words, and wrote correctly from dictation. When shown an object, *and asked to name it*, he found it impossible, although he showed clearly that he knew the object and its uses. A large number of objects were tried with the same results. "Whenever he miscalled the object he knew his mistake at once, and after several attempts to give the correct name gave up in despair." When his name was mentioned he recognised it at once, but a few moments afterwards he failed when asked his name. He appeared to understand all written and spoken words. The urine was normal. The tenderness over the left supra-auricular region was now intense and the diagnosis was made of a lesion involving the left temporal lobe below the angular gyrus. On trephining at a spot one inch below the angular gyrus the brain bulged but appeared to be normal. A second trephine hole was made over the lateral lobe of the cerebellum with negative results. The patient died shortly afterwards and the necropsy showed the presence of mastoiditis with necrosed bone and foul-smelling pus in the mastoid cells. The brain was normal in appearance except in the posterior part of the inferior temporal gyrus, where an abscess cavity was found of about the size of a walnut, with thick, foul, viscid pus. The brain tissue around its margin for three-fourths of an inch was somewhat softened. The site of the lesion corresponded very precisely with that recorded by Professor Mills in the case of a patient with similar symptoms.

M. BERTHELOT.

THE great chemist M. Berthelot has just completed his 50 years of service as a scientific teacher—an occasion which was celebrated at the Sorbonne in Paris this week. No chemist perhaps has so well and truly helped to lay the foundations of chemistry as has M. Berthelot, and that the congratulations he received came from all civilised nations is no matter for surprise. His career has been a remarkable one. He became a professor at the early age of 24 years, and a brilliant investigator within a few years of this appointment, gaining enormous insight into the laws which lay at the root of chemical architecture. Perhaps his most epoch-making discovery was his demonstration of the true nature of glycerine as an alcoholic body capable of interacting with three molecules of such acids as acetic and palmitic, although his contributions to thermal chemistry were models of ingenuity, resource, and orginal conception. Later he attacked the question of synthesis and until the publication of his "Chimie Organique fondée sur la Synthèse" no systematic research had been attempted in the direction of building up compounds of carbon comparable with natural organic compounds by the union of the elements of which they are composed. We must remember, however, Wohler's synthesis of urea in 1828 and Kolbe's synthesis of acetic acid in 1845. But the methods subsequently employed by M. Berthelot were more simple and direct. He started, for example, with the elements themselves. He took carbon and hydrogen which produced acetylene; adding more hydrogen he got ethylene, and from this he obtained alcohol and a series of organic salts. Again, he set himself the task of proving that compounds identical in every respect with the products of animal and vegetable life may be formed from dead mineral matter. Thus in a series of experiments he employed the carbon obtained in the form of carbon dioxide from barium carbonate. It was then made to pass successively through the forms of carbonic oxide, formic acid, barium formate, ethylene, ethylene bromide, ethylene again, and finally into ethyl-sulphuric acid and its crystallised barium salt, from which the ultimate object of these experiments—alcohol—was generated. It follows that water and carbon dioxide were the only compounds from which the elements of this alcohol were derived. Little wonder, then, that scientific men of all the civilised nations assembled at the Sorbonne to do honour to this great exponent of nature's methods and mysteries. Amongst those present were the President of the French Republic (M. Loubet), M. Moissan, M. Fouque, Dr. Fischer (of the Prussian Royal Academy), Professor Ramsay (representing the Royal Society), Professor Lieben of Vienna, and a number of others representing the learned societies or universities of the whole world.

DOLLS AND INFECTION.

IT has been stated that the stuffing used in dolls has given decided evidence of a very objectionable origin, discarded articles of apparel such as cut-up neckties and scarves having been used for the purpose. Of course, if this be true, dolls so stuffed could easily be sources of infection. The matter is of some importance although we are not certain how far the statement is justified, but we have personally more than once experienced something in the nature of a shock on inquiring into the anatomy of the favourite, because indestructible, "gollywog," for certainly the pieces of cloth which comprised its inside did not look altogether free from reproach. However, there is no reason why dolls should not be stuffed with unobjectionable materials. We should like to go further and to suggest that the stuffing should consist of a material treated with a harmless antiseptic. Excellent stuffing for the purpose would be eucalyptus sawdust or antiseptic peat-wool, which is not expensive and which far from being injurious would probably exercise a beneficial effect. The instinctive fondness of children for kissing their "dollies" is well known, and it cannot be disputed that such kissing is at all times non-hygienic and it would be better if measures of disinfection could be employed whenever the practice is indulged in. The highly-scented handkerchief can be a pleasant means of accomplishing this purpose, and there is no reason why a doll could not be treated similarly with a pleasant antiseptic. The general idea that an antiseptic must be disagreeable in character, as is the case with carbolic acid, is, of course, erroneous.

THE ROYAL DENTAL HOSPITAL OF LONDON.

IT is to be hoped that the excellent work which is carried on from year to year by the (now Royal) Dental Hospital of London will meet with that substantial encouragement which it deserves. According to the statement made by Mr. W. H. Woodruff who presided on the occasion of the annual dinner of the staff and present and past students of the hospital which was held at the Hôtel Métropole on Nov. 23rd no less than 69,000 operations had been conducted within the walls of the hospital during the past 12 months and the work in the new hospital continued to increase at an enormous rate. The institution is undoubtedly doing yeoman service in relieving the poor and necessitous, for, as Dr. J. W. Washbourn pointed out in proposing the toast of "The Hospital and School," during the past year over 40,000 teeth had been extracted, upwards of 16,000 had been filled, and 350 people had been provided with artificial teeth. Dr. Washbourn referred also to the great progress which had been made in dental surgery since the hospital was founded—a progress to which the students of that hospital had in no small measure contributed. It was satisfactory to know that at last they had gained entrance into a building which was better fitted for the philanthropic and educational needs of the institution. Since occupying the present new and commodious building the school committee had recorded

an unprecedented number of entries, as many as 55 new students having enrolled their names on the books. This was all the more satisfactory in view of the fact of the general diminution of entries this session at all the metropolitan hospital medical schools and in view also of a decided falling-off in the registrations of the General Medical Council. The authorities of the Royal Dental Hospital appeal urgently for assistance to discharge a mortgage of £55,000 upon the new building, towards which it is necessary to raise a sum of £4000 each year. During the evening some donations were promised.

THE LORD MAYOR'S BANQUET AND THE MEDICAL PROFESSION.

AT the recent Guildhall banquet the two English Royal Medical Colleges and the General Medical Council were for the first time represented officially. We learn that this happy innovation is due to a member of the Council of the Royal College of Surgeons of England who laid the matter before Sir Joseph Dimsdale. The present Lord Mayor, as we have pointed out on a previous occasion, numbers an illustrious physician among his ancestors, so it is fitting that the new departure should have been made under his ægis, but, further, the medical profession is closely connected with the City. The Royal College of Surgeons of England grew after many years out of letters patent granted by Edward IV. to the "Freemen of the Mystery of Barbers of the City of London, using the Mystery or Faculty of Surgery," while the Royal College of Physicians of London for years had its habitation under the shadow of St. Paul's. It is interesting to note that the latter College was founded because Henry VIII. thought that it would be an excellent thing "si improborum conatibus tempestive occurramus apprime necessarium duximus improborum quoque hominum, qui medicinam magis avaritiae suae causâ, quam ullius bonae conscientiae fiduciâ, profitebuntur, unde rudi et credulae plebi plurima incommoda oriantur, audaciam compescere." His Majesty's desire, however laudable, was not fulfilled, although the College prospered, and so, 340 years later, the General Medical Council was founded to enable persons requiring medical aid to distinguish qualified from unqualified practitioners. The unlettered and credulous populace, however, to say nothing of persons in higher ranks of society, are still prone to employ the class of practitioner described by Henry VIII. as *improbus*. We are not unmindful of the banquet given to the medical profession in May, 1898, by Colonel H. D. Davies when Lord Mayor, but we are nevertheless glad that the first year of a new reign should have seen our profession officially represented at the great City festival on Nov. 9th, which is moreover the King's birthday.

IN connexion with the West Kent Medico-Chirurgical Society the Purvis Oration on General Practice and Original Research will be delivered by Dr. James F. Goodhart at the Royal Kent Dispensary, Greenwich-road, Greenwich, on Friday, Dec. 6th, at 8.45 P.M. After the oration a conversazione will be held and there will be an exhibition of lantern views of foreign health resorts, electrical and scientific apparatus, surgical instruments, therapeutic preparations, and diabetic foods.

DR. C. J. CULLINGWORTH'S term of office as obstetric physician to St. Thomas's Hospital having expired in June last the hospital authorities, in very complimentary terms, have offered him an extension of three years. Dr. Cullingworth has, however, been advised that he ought to diminish his work, for which reason, and because he was anxious not to hinder the ordinary course of promotion, he accepted the gratifying offer of the Governors with the understanding that his colleague, Dr. Walter W. H. Tate, should be appointed full obstetric physician and become responsible for the larger share of the routine work of the ward. This suggestion having received the support of the staff of the hospital, the technical difficulties were removed, and at the last meeting of the Court of Governors Dr. Tate was elected an additional obstetric physician with charge of 21 out of the 28 beds, the remaining seven being allotted to Dr. Cullingworth.

AT a meeting of the council of the Association of Public Vaccinators of England and Wales, held on Nov. 22nd, the publication of a notice in the *Standard* by the lay organising secretary was considered, and the council expressed its regret that such a communication should have been made to the press without its knowledge or sanction.

THE Bradshaw Lecture of the Royal College of Surgeons of England will be delivered in the theatre of the College by Mr. T. R. Jessop on Wednesday, Dec. 11th, at 5 P.M., the subject being Personal Experiences in the Surgical Treatment of Certain Diseases.

THE annual conversazione of the Royal British Nurses' Association will be held under the patronage of the President, H.R.H. Princess Christian of Schleswig-Holstein, at the Kensington Town Hall, on Tuesday, Dec. 3rd, at 8 P.M.

DR. W. H. CORFIELD, consulting sanitary adviser to His Majesty's Office of Works, has been awarded by the Royal Society of Public Medicine of Belgium its bronze medal in recognition of his devotion to public health work.

THE twenty-third annual dinner of the Leeds Past and Present Students is to be held on Thursday, Dec. 5th, at the Queen's Hotel, Leeds, at 7 P.M. Mr. C. J. Wright will preside.

DIPHTHERIA.—At the meeting of the Bridgwater Town Council held on Nov 21st, the medical officer of health (Mr. F. J. C. Parsons) reported that since July last there had been 75 cases of diphtheria notified in the borough, 16 of which had terminated fatally. Mr. Parsons added that he regretted that the isolation hospital had not been more generally used.—At the meeting of the Barton Regis Rural District Council held on Nov. 22nd it was reported that during the present year 160 cases of diphtheria had occurred in the district, which is in the immediate neighbourhood of Bristol. The majority of the cases had occurred at Shirehampton. At present there were 32 patients in the isolation hospital.

COCAINE POISONING.—Referring to the case of alarming symptoms induced by cocaine used as a local anæsthetic, recorded by Dr. Kenneth Fraser in THE LANCET of July 20th, 1901, p. 145, a correspondent points out that a somewhat similar case was published in the *Australasian Medical Gazette* of April 20th, 1901. The patient was a healthy woman, 30 years of age, who had several stumps of teeth extracted, 30 minims of a 1 per cent. solution of cocaine being injected into the gums without giving much, if any, relief from pain. A fortnight after this event further extractions were required, and the medical man injected "a quarter of a grain of cocaine tincture" into the gum where it seemed most tender. After waiting 10 minutes he repeated the dose, the gums being apparently in no way anæsthetised by the quarter of a grain. Within two minutes the patient was in a most alarming state; her colour suggested syncope, her respiration became very rapid and shallow, and her pulse rapid and fluttering. An ounce of compound spirit of ammonia was administered in small doses frequently repeated, and artificial respiration was maintained, but it was fully an hour before she ceased to sigh and to complain, having been unconscious most of the time.

Looking Back.

FROM

THE LANCET, *SUNDAY, NOV.* 30, 1823.

JONAH'S RESIDENCE IN THE WHALE'S BELLY ACCOUNTED FOR ON PHYSIOLOGICAL PRINCIPLES, BY DR. PEARSON.

PHYSIOLOGICAL facts are never more interesting than when they are found to confirm the great truths of our religion, and to afford a satisfactory explanation of phenomena which infidels have treated with derision, without the necessity of resorting to a miraculous agency. Dr. Pearson, of George-street, Hanover-square, in lecturing a few days ago upon the stomach, observed, that this organ had no power over substances endued with vitality; and that this circumstance accounted for the fact of the prophet Jonah having remained undigested in the stomach of the whale for the space of three days and three nights. Dr. Pearson's discovery is highly important, both in a medical and theological point of view: it furnishes a complete answer to all the objections which have been urged by sceptics against that part of the Sacred Volume in which this singular adventure is related. How the prophet passed his time in the cavity of the whale's stomach—how far the confinement affected his organs of respiration—in what manner he derived his sustenance, or whether he required any sustenance at all, are all questions of minor importance. The fact of the stomach having no power over vital substances having been once established by Dr. Pearson, the corollary is obvious. The argument may be thus stated:—When Jonah entered the whale's stomach, either he was alive or he was not alive. If he were not alive, the stomach would have had the same power over him as over any other inanimate substance, and the prophet would have been digested in the ordinary way; but he was vomited out alive on the fourth day; consequently he was alive when he entered the stomach. Now, as he was alive when he entered the stomach, and as the stomach has no power over a living substance, it is evident that he must have continued to live. Hence, when the action of vomiting was excited, and he was thrown up on the fourth day, he was deposited on the dry land, probably without any other inconvenience than some trifling derangement of his canonicals. Dr. Pearson deserves the thanks of the pious, as well as the philosophical part of the community, for having explained this phenomenon in a manner which renders it as demonstrable as any of the propositions of Euclid.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

A GENERAL meeting of this association was held in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, W., on Nov. 21st, Dr. G. F. BLANDFORD being in the chair.

Mr. E. D. O'NEILL (Limerick) moved the following proposition:—

Resolved, that the Medico-Psychological Association of Great Britain and Ireland earnestly desires to call the attention of Government to the great injustice inflicted on Irish asylum officials by the wording of the clause of the existing Act of Parliament dealing with the question of superannuation. It regrets that the Government did not avail themselves of the opportunity afforded by recent legislation to make more secure the provision for old age in the asylum service. The association respectfully urges on the Government an alteration of the said clause by the introduction of the word "shall" instead of "may." It points out that all other services have a fixed scale of pension, and every official knows when he is entering what he will be entitled to on retirement; whereas asylum officials are left entirely to the discretion of their committees, from whom there is no appeal.

Resolved, that a copy of the foregoing resolution be forwarded to the Right Hon. George Wyndham, M.P., Chief Secretary for Ireland.

Mr. HAYES NEWINGTON seconded the motion. He said that the Parliamentary Committee of the association, of which he was the president, had had the matter before them for 10 or 12 years.

The motion was unanimously carried.

Sir THOMAS LAUDER BRUNTON delivered an address on the subject of "Fairies, Apparitions, and Hallucinations." He explained that by hallucinations he meant perceptions having no objective cause; by illusions, perceptions having an objective cause wrongly interpreted; by visions, hallucinations of the sense of sight; and by apparitions, appearances or hallucinations affecting some one person or thing that the person seeing the vision has known. The changes in the nerve-cells of the brain which accompanied perception were usually originated by some impress made upon the senses of sight, hearing, taste, smell, and common sensation, which were conveyed by the nerves to the brain, where they were perceived. Some persons had an almost miraculous keenness of sense, of which he gave some striking instances in savages. Just as some people could hear sounds to which others were deaf, and others saw things to which their fellows were blind, so some persons could feel what others could not. He dealt at length with the locating of water underground by the aid of the divining road, and said that he believed the power was possessed by some people, but that they were all of a highly sensitive character. This sensitiveness could be influenced by drugs; the tendency of strychnine was to make the senses keener while cocaine made them blunter. He explained at length some experiments which he had made on the subject of thought transference and allied phenomena, and referred to the involuntary continuance of the association of ideas which had once been strongly fixed in the mind. When a student began to learn auscultation he did not really hear what was in the chest but what he thought he ought to hear. He next dealt with the subject of premonitions, and advanced ingenious explanations of the phenomena. Since the discovery of wireless telegraphy it was reasonable to suppose that one man's brain might act as a transmitter and that of another person as a receiver. Apparitions were often traceable to an alteration of the apparatus concerned, as in the case of a lady who said she saw a goat's head projected before her and who was found to have a central scotoma corresponding to the shape of a goat's head. Head had shown that salicylate of sodium would produce visions and those might also arise from superficial cerebritis and brain irritation. The Koran was said to have been communicated to Mahomet in visions, and it would be interesting to speculate on what the fate of the world would have been if bromide of potassium had been known and Mahomet had been thoroughly dosed with it.

Dr. G. H. SAVAGE said that Sir T. Lauder Brunton's remarks about the limitation of our senses were all-important, and Sir Samuel Wilks used to say, when going through the Bethlem wards, "How do you know that those hallucinated people are not speaking the truth and that it is not your ignorance which makes you deny that there are voices and visions!" He (Dr. Savage) recognised that there were many "x rays" associated with the senses, and he regarded the explanations given by Sir T. Lauder Brunton of some of the telepathic experiences as being altogether satisfactory. Regarding hallucinations, he was in the habit of saying to students that he had not read an Æsop's fable which had not at some time been represented in the hospital wards.

Dr. C. MERCIER highly complimented Sir T. Lauder Brunton on his address. He agreed with Professor Clifford Allbutt that the supernatural should not be drawn upon for elucidating phenomena until all natural laws had been exhausted. Sir T. Lauder Brunton had shown that many things usually regarded as occult could be explained by known natural laws.

Mr. NUTT, of the Folk-lore Society, drew attention to the similarity of the signs and forms observed at all periods of history and in all countries, and thought that the explanation was to be sought in a "law of convention."

Dr. ROBERT JONES (Claybury) said that the truth probably lay between the two views which had been mentioned. Children and untutored savages had always shown a strong regard for personifying the great forces of nature. He agreed with Sir T. Lauder Brunton that hallucinations were often due to association of ideas, but might be spontaneous from the subliminal consciousness. He had never seen a deaf-mute with a hallucination of hearing, or a hallucination of sight in a person congenitally blind. Hallucinations could not be a new creation.

Sir T. LAUDER BRUNTON, in reply to Mr. Nutt, mentioned that the uniformity of signs and forms was probably due to headaches and other disturbances being produced in the same way the world over.

Dr. W. C. SULLIVAN, of H.M. Prison, Pentonville, read a paper entitled, "Crime and General Paralysis." After

referring to the large number of general paralytics sent to prison, it was pointed out that the offences of which they were guilty were almost always crimes of acquisitiveness. In this respect they contrasted with senile and alcoholic lunatics, who rarely had impulses of acquisitiveness, but were very prone to suicidal and homicidal impulses. The reason of this contrast was to be found in the difference of the emotional tone in these states of dementia—usually pessimist in the senile and alcoholic and optimist in the general paralytic. The emotional tone in all states of mental enfeeblement was a reflex of the visceral condition, and not a direct effect of the brain lesions. This tone, with the related impulses, preceded and determined the modes of thought; the dement with healthy viscera had impulses of acquisitiveness and delusions of exaltation, while the dement with diseased organs had impulses of aggression and delusions of persecution or depression. The priority of insanity of conduct to insanity of thought was the most important fact in criminal psychology.

Dr. ROBERT JONES said that the paper dealt with a field of psychical research in which the majority of those present had no experience—viz., the insane in prisons. Bevan Lewis had shown that physically the condition of the nerve- or brain-cells did not vary very much in mania and melancholia. Dr. Sullivan had said that general paralytics who came under his care were of the depressed type, and that agreed with his own experience in regard to those received into the asylum from prisons. Dr. Jones also alluded to the researches of Ford Robertson into the condition of the intestinal mucous membrane in general paralytics as bearing upon the emotional tone.

Dr. T. SEYMOUR TUKE mentioned the case of a well-preserved man, aged 62 years, who had been in the habit of massaging every muscle each day and who had had great exaltation from the start.

Dr. SULLIVAN briefly replied, pointing out that some of the post-mortem conditions referred to by Bevan Lewis were not unanimously accepted. What the underlying cerebral condition was which accounted for tone was still a matter of speculation.

THE CLAMOND GAS RADIATOR.[1]

OWING to the introduction of the incandescent mantle by Auer von Welsbach, gas-lighting, as is well known, has been enormously improved during recent years, but it is remarkable that with this progress no corresponding advance to speak of has hitherto been made in the methods of heating by gas. Yet it might be thought that as the improvements in gas-lighting have been due to the fact that increased heating effects have been obtained from coal gas similar improvements would have applied to gas-heating appliances with advantage. However that may be, it is only quite recently, apparently, that the idea occurred of applying to gas-stoves the now well-known modification of the atmospheric burner, the Kern burner so successfully used in incandescent lighting because of its intense heat.

The Kern burner is an enormous advance on the ordinary atmospheric burner producing the Bunsen flame and the many advantages which it unquestionably gives in incandescent lighting must *a priori* obtain where the burner is applied for heating purposes. The construction of the Kern burner is quite simple; it only differs from the Bunsen burner in having its anterior mixing chamber somewhat larger and shaped like two funnels placed end to end—that is to say, the gas is injected into a funnel-like opening and passes on to a constricted part which widens out again in funnel fashion. The burner contains also a metal cylinder provided with an infinite number of tiny perforations. The gaseous mixture effected contains exactly the proportions of coal gas and air required for complete combustion. In reality the Kern burner deals with complete safety with an explosive mixture, and since the proportion of gas and air is exactly what is required by theory for complete combustion a maximum heating effect is obtained and no unburnt products are produced. The result is that the Kern flame continues to burn even though it be surrounded by a tube cutting off the external air because the gas is mixed with air in sufficient proportion to complete its combustion. This proportion is one volume of gas to five and a half volumes of air. In most of the atmospheric gas-burners used in gas-stoves the proportion of air to gas seldom exceeds three to one, so that if the flame were cut off from contact with the external air the combustion would necessarily be incomplete. The Kern flame is without luminosity and of exceeding intensity. It resembles, in fact, a blow-pipe flame, though it is produced automatically and without pressure. The flame may be employed to produce radiant heat or light at will.

In the Clamond gas radiator[2] the intense heat of the Kern flame is in great part translated into radiant heat by surrounding it with a perforated fire-clay tube, as seen in Fig. 1. This fire-clay tube is the radiator in the Clamond heater much as is the carbon filament in electric heaters. The Clamond gas radiator consists essentially of a number of these tubes, generally five or ten, placed over Kern burners, each consuming two cubic feet of gas per hour. The gas may be turned on to all of the tubes, or to five of them, in accordance with the heating effect desired. Fig. 2 and Fig. 3 show two forms of the radiator, the former of which is without a casing or jacket, while the latter is cased with iron sheeting in such a way that heat is derived from the flues and thus currents of warmed air are circulated. The Clamond radiator is provided with a flue and it is necessary that the flue should be inserted through a hole in a sheet-iron plate covering up the fireplace. A further important arrangement is the iron curtain just over the top of the radiating tubes. This is adjustable and prevents the escape of combustion products into the room. The essential feature of the Clamond heater is that it produces radiant heat, and this fact, coupled with the economy which is effected, favourably distinguishes it from all others.

FIG. 1.

The ideal system of artificial heating is undoubtedly by radiation, according to which heat particles are projected into space without immediate effect upon the air. These particles in encountering solid objects impart their heat to them and thus the heat of a radiating fire may be communicated across space to distant objects without appreciably affecting the temperature or the physical condition of the intervening air. The freshness or "vitality" of the air is in no way disturbed by the passage of radiant particles through it. On the other hand, hot air is unhealthy and oppressive. The method of heating by hot-air currents or by convection is, however, more economical than by radiation, but this economy is to a very large extent obtained under the enormous disadvantage arising from the usually unhealthy condition of the air produced by warming it in contact with superheated surfaces. It is a common experience that radiant heat is by far the most comfortable and most endurable.

Of course, the heating efficiency of coal-gas may be wholly utilised by simply allowing it to burn in the open room without any provision for carrying away the products of combustion. Thus a row of Kern burners placed in a room would impart to the air of that room that amount of heat which the gas is capable of giving, but practically the whole of the heat produced would be communicated by means of air warmed and kept circulated by the flames. There would be no radiant heat, and the effect upon the air, apart altogether from the products of combustion, would be unhealthy. When, however, a resistance is introduced into the flame in the shape of an indestructible solid body more or less suited to the purpose the result is the production of heat in a radiant form. The body becomes more or less red-hot. It is analogous to the production of light by introducing the mantle of the rare earths into the flame. In a word, heat in the radiant, and in the most healthy, form is obtained by placing a resistance in the path of the flame; and this is exactly the principle of the Clamond gas radiator, a principle adopted in many gas-stoves but not satisfactorily realised in practice.

As the experiments to be described show, the Kern burner deals efficiently with the combustion of coal gas, and therefore yields a maximum heat intensity, so that it is calculated to prove a source of heat free from reproach from a hygienic

[1] Previous articles upon the subjects of gas-stoves and smoke prevention and perfect combustion will be found in THE LANCET of March 21st, 1891; March 5th, 1892; and Nov. 26th, 1893.

[2] Kern Burner Co., Gravel-lane, Southwark, London, S.E.

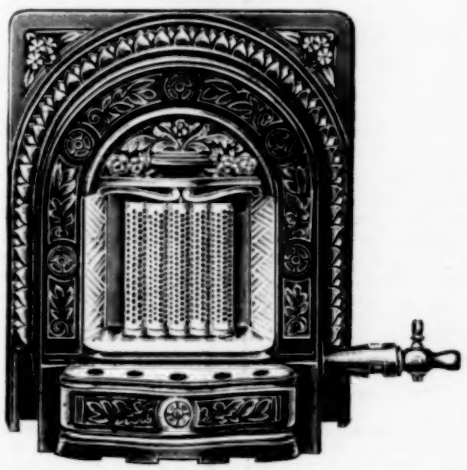
standpoint, for the more intense the heat the more effectual will the combustion be. There are, then, two main points to be considered in estimating the value of a gas fire: first, its heating efficiency—that is, the heat which it is able to realise from a given amount of gas consumed; and, secondly, the influence of the system upon the air from a sanitary point of view. We may dismiss at once, of course,

FIG. 2.

any possibility of the formation of smoke, but invisible products of combustion may be not a whit less injurious and the gas-stove that produces them and allows them to escape into the air should be summarily condemned.

The experimental portion of this inquiry relates therefore to the heating efficiency of the Clamond gas radiator, whether effected by radiant heat or by convection, the effect

FIG. 3.



upon the air from a hygienic point of view, the composition of the gases in the mixing chamber of the Kern burner, and the progress of combustion as determined by an analysis of the gases within the fire-clay tube or radiator and of the gases ultimately escaping by way of the flue.

The following tables—Tables I., II., III., and IV.—record results showing the heating efficiency of the Clamond gas radiator and its effect upon the air. Tables I. and II. refer to a stove furnished with a hot-air chamber. It was cased in sheet iron provided with air inlets and outlets. Tables III. and IV. give the results obtained with a stove without such casing, so that the heating effect was due in great part to radiant heat. The experiments were all conducted in a room of 1500 cubic feet capacity. The cost of gas is assumed to be 3*s.* per 1000 cubic feet. The temperatures throughout are recorded in degrees Fahrenheit.

TABLE I.—HEATING EFFICIENCY OF STOVE (FIG. 3) AND ITS EFFECT UPON THE AIR.

Experiment 1.—Stove with hot-air chamber, without iron curtain; pressure of gas three inches; consumption 22 cubic feet per hour.

1. Time	4.28	4.58	5.28	5.58	6.28
2. Temperature two feet in front of fire	54	103	118	119	119
3. Temperature six feet in front of fire	52	62	66	67	68
4. Temperature of room (mean)	51	56	59	61	63
5. Temperature of currents over stove	53	184	220	221	250
6. Moisture in the air (100 = saturation)	88	82	79	82	79
7. CO_2 in the air at breathing level	5·4	—	7·10	—	8·0
8. Increase of CO_2 from the start (parts per 10,000)	—	—	1·7	—	2·6

Result (based on two hours' working): 44 cubic feet of gas, costing 1·58*d.*, raised the temperature 12 degrees in two hours. Cost per degree = 0·13*d.*, or a consumption of 3·6 cubic feet of gas.

TABLE II.—THE SAME STOVE.

Experiment 2.—Pressure of gas two inches; consumption 20 cubic feet per hour.

1. Time	7.45	8.15	8.45	9.15	9.45	—
2. Temperature two feet in front of fire	52	103	112	116	120	—
3. Temperature six feet in front of fire	52	62	64	68	70	—
4. Temperature of room	52	57·5	61	63	65	13
5. Temperature of currents over stove	52	210	220	240	250	—
6. Moisture in the air	94	94	94	94	94	—
7. CO_2 in the air	5·4	—	6·2	—	7·4	—
8. Increase of CO_2 from the start (parts per 10,000)	—	—	0·8	—	2·0	—

Result (based on two hours' working): 40 cubic feet of gas, costing 1·44*d.*, raised the temperature 13 degrees in two hours. Each degree raised cost 0·108*d.*, or three cubic feet of gas.

TABLE III.—STOVE SHOWN IN FIG. 2.

Experiment 1.—Gas pressure two inches; consumption 20 cubic feet per hour.

1. Time	10.0	10.30	11.0	11.30	12.0
2. Temperature two feet in front of fire	50	102	112	116	117
3. Temperature six feet in front of fire	50	61	63	65	66
4. Temperature of room	50	55	58	60	61
5. Temperature of currents above stove	50	132	132	128	126
6. Moisture in the air	91	88	88	88	88
7. CO_2 in the air	3·5	—	4·2	—	4·4
8. Increase of CO_2 (parts per 10,000)	—	—	0·7	—	0·9

Result (based on two hours' working): 40 cubic feet of gas, costing 1·44*d.*, raised the temperature of the room 11 degrees in two hours. One degree cost 0·13*d.*, or 3·6 cubic feet of gas.

TABLE IV.—THE SAME STOVE.

Experiment 2.—Gas pressure two and a half inches; consumption 18 cubic feet per hour.

1. Time	2.0	2.30	3.0	3.30	4.0
2. Temperature two feet in front of fire	53	112	115	115	117
3. Temperature six feet in front of fire	53	65	67	68	68
4. Temperature of room	53	60	63	64·5	65
5. Temperature of currents above stove	53	130	132	132	132
6. Moisture in air	88	88	86	88	88
7. CO_2 in the air	3·6	—	4·0	—	4·2
8. Increase of CO_2 (parts per 10,000)	—	—	0·4	—	0·6

Result (based on two hours' working): 36 cubic feet of gas, costing 1·30*d.*, raised the temperature 12 degrees in two hours. One degree cost 0·108*d.*, or three cubic feet of gas.

As will be seen, the heating efficiency of the Clamond gas radiator is very great and we doubt whether such an output of radiant heat has ever before been attained at so little cost and so low an expenditure of gas. Thus in the case of the gas stoves examined by THE LANCET Commission in 1893 the mean amount of gas required to raise the temperature one degree was 5·4 cubic feet, costing 0·195*d.*, whereas with the Clamond gas radiator the amount of gas required to effect the same advance of temperature is three cubic feet at a cost of 0·108*d.*, nearly half the consumption and cost. The fact that the stove produces effective radiant heat is evident from the records of two thermometers, one placed two feet in front of the fire and the other six feet. The former showed after two hours a temperature of from 117° to 120° F. and the latter of from 68° to 70° F., the temperature of the room being many degrees less. It is also shown that the heating effect of the stove is soon realised, the temperature of the room having been raised from 50° to 61° F. in half an hour in some instances, with a consumption of only 10 cubic feet of gas. Nor is this heating efficiency obtained at the expense of the purity or healthy condition of the air. The degree of moisture varied only within small limits, while the increase in the proportion of carbonic acid was quite insignificant.

It will be noticed, however, that the stove provided with a heating chamber (Tables I. and II.) gave rise to a greater increase of carbonic acid gas than was the case with the stove without a heating chamber (Tables III. and IV.). This is to be accounted for partly by the fact that the former stove is not provided with an iron curtain over the top of the fire-clay radiators, as is the case with the latter stove, and partly to the hot-air currents from the heating chamber having a tendency to draw with them traces of the products of combustion. As, however, the heating efficiency of the stoves is practically the same the hot-air chamber would appear to afford no advantage, either as regards heating efficiency or hygienic effect. A rough but very practical proof of the radiant heat projected by the Clamond radiator can be obtained by exposing a slice of bread to the rays, as in making toast.

It is interesting next to examine the gaseous mixture effected by the Kern burner. In a series of five analyses the average result was found to be one part of coal gas to 5·5 parts of air. On igniting the mixture in a closed tube over mercury complete combustion was proved to have ensued, nothing but carbonic acid gas, nitrogen, and water remaining. There is therefore in the Kern burner neither excess of gas nor excess of air, the ratio of one to the other being exactly in accordance with theoretical requirements for perfect combustion. The atmospheric burners of ordinary gas stoves, on the other hand, seldom effect a mixture in which the air exceeds the gas by three volumes. Most burners gave the ratio of 2·3 of air to 1 of coal-gas.

The next table (Table V.) is of interest in showing the composition of the gases taken from the middle of the fire-clay tube or radiator.

TABLE V.—*Composition (by volume) of the Gases taken from the Middle of the Fire-Clay Tube.*

	Experiment 1.	Experiment 2.
Carbonic Acid (CO_2)	5·20	5·50
Oxygen (O)	1·46	1·25
Carbon Monoxide (CO)	7·08	6·50
Hydrogen (H)	6·04	8·00
Hydrocarbons	1·46	3·00
Nitrogen (N) by difference	78·76	75·75
	100·00	100·00

The results give the history and progress of the combustion. The bulk of the hydrogen and methane are evidently burnt at the lower part of the tube, while the carbon monoxide with some hydrogen and hydrocarbon burn in a blue fringe of flame near the top of the fire-clay tube, ultimately yielding complete products of combustion, as shown in Table VI.

TABLE VI.—*Composition (by volume) of the Gases taken from the Top of the Fire-Clay Tube.*

	Experiment 1.	Experiment 2.	Experiment 3.
Carbonic Acid (CO_2)	6·76	6·08	6·00
Carbon Monoxide (CO)	No trace...	No trace...	No trace.
Oxygen (O)	8·70	9·94	10·24
Nitrogen (N) by difference	84·54	83·98	83·76
	100·00	100·00	100·00

This table demonstrates the interesting and most important fact that in the Clamond gas radiator the combustion of coal gas is complete, and without the production of those partly burnt gases or escaping unburnt gases which are injurious to health. In no instance was the deadly carbon monoxide found either in the gases escaping from the flue or in the air of the room, although the most approved test for this gas was applied—viz., after absorbing all the oxygen by phosphorus the residual gas was shaken with fresh blood. The result was always negative. This is hardly surprising when we consider the intensity of the Kern flame. The result speaks highly in favour of the Kern burner as a hygienic means of warming and maintaining the temperature of a room.

A few words may be added on the management and conduct of the Clamond gas radiator. It is easily controlled, readily lighted, and is free from that great drawback of atmospheric burners—it cannot "light back"—that is to say, the flame never runs back to the gas nipple. It is important that the pressure and the supply of gas should be sufficient. The Kern burner, however, is not always free from that whirring noise characteristic more or less of all gas-stoves. Improvement in this direction is desirable and doubtless will be attained unless the noise is an inevitable concomitant of burners through which a mixture of gas and air is passing. The heat of the Clamond gas-radiator may be easily regulated, the stove being provided with two stop-cocks, each controlling five burners. In some cases it appears to be desirable to be able to reduce the number of burners still further, so powerful is the heating efficiency.

Under any circumstances we think the Clamond gas-stove should be properly attached to a chimney-vent, the flue running through a hole provided in sheet-metal casing. The sulphur compounds inseparable from coal-gas demand this precaution, while however perfect the combustion may be it is not desirable to diminish the proportion of oxygen in the air by adding carbonic acid gas to it. The Clamond gas radiator resembles closely in appearance the electric radiator; it presents a bright cheery-red heat within a few moments of its being lighted, thus obviating any cooling down of the products—a process which leads to the formation of unburnt and injurious gases which is one of the drawbacks of the ordinary gas-fire where a mass of inert fire-clay has to be heated.

The results of this inquiry distinctly confirm what is claimed for the Clamond gas radiator—it gives a cheerful, healthy, radiant heat, is remarkably economical, and, as far as our experiments have gone, shows no deteriorating effect upon the air.

THE LANCET Laboratory.

THE GENERAL MEDICAL COUNCIL: ELECTION OF DIRECT REPRESENTATIVES, 1901.

THE MEDICAL GUILD OF MANCHESTER AND DR. WOODCOCK'S CANDIDATURE.

WITH reference to the official announcement of the guild that was published in THE LANCET last week to the effect that it had been resolved to urge members of the guild to plump for Dr. S. Woodcock, Mr. G. H. Broadbent has sent us a copy of a letter to the president of the guild protesting against the way in which the resolution was obtained. This letter has been signed, he informs us, by several prominent members of the council of the guild who consider the action of the chairman of the meeting at which the resolution was passed to have been irregular.

THE CANDIDATURE OF MR. GEORGE BROWN AND MR. GEORGE JACKSON.

A meeting, which was attended by about 40 of the medical practitioners of Halifax and neighbourhood, Dr. E. West Symes being in the chair, was held on Nov. 26th at the White Swan Hotel, Halifax, to hear addresses from Dr. J. Brassey Brierley, Mr. Colin Campbell, and Mr. G. H. Broadbent, a deputation from the Manchester committee of Mr. George Brown and Mr. George Jackson. At the conclusion a vote of thanks was passed to the former gentlemen and those present unanimously pledged themselves to support the two candidates in question. A further motion was carried earnestly protesting against any Bill being passed by Parliament which had for its object the creation of an order of practitioners licensed

only to practise any one branch of the profession. Dr. Brierley pointed out that the General Medical Council had really no legal power to sanction any certificate issued to women who were not recognised medical students.

ASYLUM REPORTS.

Gartloch Asylum, Glasgow (Annual Report for 1900).—The average number of patients resident during the year was 522, and comprised 273 males and 249 females. During the year 268 patients were admitted, of whom 131 were males and 137 were females. Dr. Landel R. Oswald, the medical superintendent, states in his report that the admissions continue to show a steady increase. "The probable causes of the insanity among the male admissions were principally alcohol, syphilis, and the adolescent period of life. ..... Among the females moral causes were more highly operative, especially when a mental breakdown was predisposed to by inherited nervous instability." The admissions were generally of an unfavourable type as regards the prospect of recovery. An hereditary predisposition to insanity was found in nearly 40 per cent. of the admissions and though the influence of environment in causing insanity cannot be accurately estimated it is probable that in many of the admissions it acted powerfully as a cause. The number of patients discharged as recovered during the year was 84—viz., 37 males and 47 females, or 16·1 per cent. of the average number resident. The deaths during the year amounted to 60—viz., 25 males and 35 females, or 11·5 per cent., as calculated on the same basis. Of the deaths one was due to purulent meningitis, two each were due to epilepsy and puerperal septicæmia, three to pneumonia, six each to cardiac disease and senile decay, seven to general paralysis, 11 to phthisis and other forms of tuberculosis, and the rest to other causes. In 88 per cent. of the deaths post-mortem observations were made to ascertain the cause of death. "16 per cent. of the deaths were due to phthisis pulmonalis or other form of tuberculosis. Beyond doubt the larger proportion of those who died from phthisis contracted the disease here." Six patients escaped during the year, and two such patients having remained absent for 28 days were regarded as discharged. In view of the increasing admissions and of the accommodation required for the same the Asylum Committee have decided that additional buildings shall be erected which will take the form of detached houses of the following number and character: a small sanatorium for the treatment of phthisis and capable of accommodating 50 patients, a farm colony for 60 patients (50 males and 10 females), a house near the male wards for the accommodation of about 50 male cases of senile weak-mindedness and insanity, a villa for 36 women where among others there will be placed those whom it is desired to test before discharging or boarding-out, and a house for about 50 female cases of insanity and mental infirmity associated with old age. The farm report stated that the harvest and garden produce were good and abundant. "The year has been as a whole one of the development of existing arrangements and methods of treatment rather than one of trial of new ideas. ..... The treatment of acute cases by rest in bed and isolation has been more successful [than before]." The Brabazon scheme continues to give interesting employment to about 30 patients. Owing to the epidemic of small-pox in the city of Glasgow the patients generally were revaccinated and other precautions were taken, with the happy result that the disease did not invade the asylum. The Commissioners in Lunacy state in their report that the hospital was in excellent order and that the medical books were well kept.

Warneford Asylum, Oxford (Annual Report for 1900).—This is a private asylum for patients of both sexes. The average number of patients resident during the year was 94, and comprised 46 males and 48 females. During the year 23 patients were admitted, of whom 22 were first admissions. Dr. James Neil, the medical superintendent, states in his report that the admissions were more in number than in any previous year. "In the month of August (1900) the hospital became full and has practically continued so ever since, and a number of applications have had to be declined or postponed. This filling up of the house is the most important fact of our recent internal history." During the year five male and three female patients were discharged as recovered, or 8·5 per cent. of the average number resident. The deaths during the year amounted to three—viz., two females and one male, or 3·17 per cent. of the average number resident. An epidemic of influenza prevailed during the opening weeks of 1900, but without any fatal results. The Commissioners in Lunacy state in their report that the wards are very bright and cheerful and are decorated in excellent taste, that the general bodily health of the patients is good, and that the case-books and other medical records are regularly and well kept. They are glad to hear that it is intended to purchase some adjoining land which might otherwise be built over and so become detrimental to the hospital. The Committee of Management record the purchase of 14 acres of land from Magdalen College adjoining the hospital grounds and known as "The Close" for the sum of £3000. The financial condition of the institution is stated to be satisfactory.

Belfast District Asylum (Annual report for 1900).—The average number of patients resident during the year was 877, and comprised 460 males and 417 females. The admissions during the year amounted to 379—viz., 198 males and 181 females. Of these 320 were first admissions. Dr. William Graham, the medical superintendent, states in his report that the admissions of the year are "the maximum of a series of admissions which since the opening of the asylum has been mounting up by leaps and bounds." By some it is considered that the inebriate houses do not remedy drunkenness "nor do our increasing asylums prevent insanity. We must begin at the beginning. ..... If we could get only one generation free from the inherited taint [of insanity] the foundations of a new and purified society would be laid." Those with a predisposition to insanity should lead quiet lives and abstain from marrying and reproducing their kind. The increase of insanity occurs not only among the upper and middle classes, but also mainly in the ranks of the poorest and most uneducated of the people, and the bulk of it is due to neglect or violation of fundamental hygienic laws. "The remedy for crass ignorance is simply knowledge. ..... Many cases of insanity are secondary to disordered bodily function. It is by the early rectification of these physical disorders that we may hope to maintain a sound mind in a healthy body." The number of cases discharged as cured during the year amounted to 81, or about 9 per cent. of the average number resident. The deaths during the year amounted to 71, or 8·1 per cent. as calculated on the same basis. Of the deaths five were due to bronchitis, six to cerebral softening, seven to epilepsy, seven to cardiac disease, eight to pulmonary phthisis, nine to exhaustion from mania and melancholia, 10 to general paralysis of the insane, and the rest to other causes. Plans have been accepted by the asylum's committee for the erection of two villas for female patients. The cost of construction will be less in proportion than that of the larger and more elaborately equipped buildings, while the cost of administration will not necessarily be higher. A better classification of patients will also be rendered possible. The Inspector of Lunatics in his report states that overcrowding of the asylum, especially on the female side, is very serious, and the necessity for relieving it has become pressing and urgent. "The new accommodation so urgently needed need not necessarily be of an expensive character and it would be better for the insane to be housed in wooden sheds in the pure air and greater freedom of the country than shut up in the worn-out buildings and city surroundings of the parent asylum." The medical records and case-books were found to be carefully written up and admirably kept, a fact which reflects credit on the medical staff.

BRISTOL UNIVERSITY COLLEGE COLSTON SOCIETY.—The annual dinner of this society will take place in the Lecture Hall of the College on Feb. 5th under the presidency of Sir F. Wills, Bart., M.P. The Lord Mayor of Bristol will attend and Mr. Haldane, K.C., M.P., will be the guest of the evening. The president-elect is the Bishop of Bristol.

CAMBRIDGE MEDICAL GRADUATES' CLUB.—The smoking concert of the Cambridge Medical Graduates' Club was held at St. James's Hall, London, on Nov. 21st. The concert was well attended by members of the club and their guests, and also by members of the Oxford Medical Graduates' Club as guests of the Cambridge Club. After a most successful concert the members separated at 11.30. P.M. 218 were present.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the General Sanitary Circumstances and Administration of the Borough of Weymouth and Melcombe Regis, and on the Recent Prevalence there of Scarlatina, by Dr. R. DEANE SWEETING.[1]—Weymouth was incorporated by Royal Charter in 1804, and was extended at the expense of Weymouth Rural District in 1895. Its population at this year's census was 19,785. The need for a quinquennial census is well illustrated in the case of Weymouth. Each year since 1891, when the total number of inhabitants was 13,866, an excessive allowance has been made for increase of population, and before this year's census figure was published the population of the borough was locally reckoned at about 28,000, not including visitors or military. Death-rates have been calculated on inflated figures year by year, and consequently have appeared unusually low and progressively diminishing. Dr. Sweeting deals first with the sanitary circumstances of the place. There are many unhealthy dwellings and courts in certain parts of the town, where walls are damp, lighting and paving are defective, and the buildings are much dilapidated. During 1900, out of 61 representations by the medical officer of health under the Housing of the Working-classes Act, closing orders were obtained in only six cases and in only 18 instances were steps taken to repair the houses. No demolition of house-property was ordered although some of the dwellings are seemingly past repair. These facts "point to apathy, if not to something worse, on the part of the town council in dealing with this important matter." As regards new dwellings the surveyor finds by-laws difficult to enforce, as only nominal penalties have hitherto been exacted for disregard of their provisions. Builders appear frequently to neglect to give notice of their intention to build and of the completion of new dwellings. The water-supply, by a private company, is derived from springs in the upper greensand some three and a half miles from the town, and appears to be of good quality and sufficient in quantity. Sewerage has presented many difficulties in Weymouth owing to the flatness of the land on which the greater part of the town is built, and considerable expense has been incurred in providing the present system, by which sewage passes to two main intercepting sewers and thence to a storage-tank which is pumped out at ebb tide. Sewage thus pumped is at present discharged at the end of the Nothe Point breakwater, but the outfall sewer is shortly to be carried further out to sea. In wet weather the whole of the sewage is pumped directly into the harbour by an overflow pipe. House-drainage has been considerably improved of late, but in older property it is often faulty. Dr. Sweeting reports that he found many sink, waste, and rain-water pipes discharging directly into house-drains and these in turn directly into sewers. A large number, perhaps a third, of the dwellings have no flushing apparatus to their water-closets. Scavenging is performed by contractors, the corporation supplying the carts, but the work is not well done. Refuse is tipped just outside the borough in such a way as to occasion nuisance. By-laws relating to slaughter-houses date back to 1852, and these places are badly constructed and not properly supervised; common lodging-houses are not registered and by-laws regulating them are not enforced; and the condition of cow-sheds leaves much to be desired. The recent prevalence of scarlet fever appears to have affected North Melcombe Regis, a better-class residential district, much more than other parts of the borough. From Jan. 1st, 1900, to March 11th, 1901, the total number of notified cases of this disease was 162 and these occurred in 110 houses. In 28 families more than one person had scarlet fever and in five instances as many as five people in the same household were attacked. Only three out of the 162 cases were fatal. School attendance does not appear to have played any considerable part in the dissemination of infection during this epidemic. The action taken by the medical officer of health in compelling isolation in hospital was referred to in THE LANCET of Nov. 16th, p. 1368. Dr. Sweeting deals in detail with the allegations against the port sanitary authority's hospital at Wyke to which these cases were sent, and he considers the more serious charges of overcrowding, bad nursing, and bad management to be proved. He draws attention to the opportunities of spreading infection at this hospital and to the cost which the town council has incurred in connexion with these unsatisfactory "isolation" arrangements—a sum considerably over £1000. The report further deals in detail with the sanitary administration by the town council and their officers and concludes with a series of recommendations.

[1] London: Eyre and Spottiswoode, East Harding-street; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 6d.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Shropshire County District.—Dr. Charles Porter, in submitting his first annual report as county medical officer of health, states that the census population of Shropshire was 239,297, a figure which shows an increase of but 1 per cent. on that of the previous census. The birth-rate for 1900 was the lowest on record, and Dr. Porter calls attention to the fact that in the country as a whole the fall in the death-rate is not keeping pace with that in the birth-rate, a reflection of a sufficiently serious nature from a national standpoint. Fresh arrangements have been entered into between the Shropshire County Council and the University of Birmingham by means of which examinations for diphtheria, enteric fever, tuberculosis, plague, cholera, and anthrax, as also the bacteriological examinations of milk and water, are made. For this provision the county council pay the university a minimum annual fee of 50 guineas, each examination being made at two-thirds of the price scheduled in the university published list. Each medical man in the county is provided with a set of three outfits and when one outfit is sent to the laboratory another is forwarded to fill its place. The isolation accommodation in Shropshire is very indifferent, but we expect that Dr. Porter will soon have a better state of affairs to report. The shortcoming in question, and, indeed, others of a no less serious nature, are laid by Dr. Porter at the door of Shrewsbury, the county town. Here there is a small "emergency" hospital of six beds, but the cost of admittance is such as to deter even this building from being used. There is only one steam disinfecting apparatus in the county. The water-supply of many districts within the county is decidedly questionable, and in this matter again the county town is brought up for censure. Certainly Shrewsbury does not seem to be impressed with its responsibilities as regards sanitary measures. However, Dr. Porter has apparently in Shropshire generally almost a virgin soil to commence operations upon.

Essex County District.—Dr. J. C. Thresh, in conjunction with the issue of one of his recent notification returns, has caused a notice to be circulated relative to the steps to be taken should small-pox break out in one or another district of the county. The usual preventive and controlling measures are enjoined, and Dr. Thresh also advises that where no proper isolation hospital is available a hospital tent should be procured. Such a tent, with the furniture appertaining thereto, can, it is pointed out, be stored in a specially-arranged van and kept ready for instant use. The tent is utilised for the patient and the van as a sort of administrative block. With warm weather these tents should serve their purpose well, but there may be some little difficulty in adequately warming them in very cold weather.

Stockport Urban District.—The infant mortality in this town amounted in 1900 to more than one-fifth of the number of births registered—i.e., only 797 out of every 1000 born saw their first birthday. The infantile mortality rate for England and Wales as a whole was 154, that for the "33 great towns" 172, and that for the "67 other large towns" 166 per 1000 births in each instance. Intestinal diseases have been responsible for the Stockport figures and Dr. Meredith Young agrees with his predecessor, Dr. Charles Porter, in believing that the education of the public is the only remedy for this lamentable state of affairs. With the object of carrying such education into effect a female sanitary inspector has been appointed to assist mothers with advice in the preparation of food and generally in the rearing of infants. The teaching of elementary hygiene in the Stockport schools seems to be proceeding smoothly, and the head-masters of the public schools have cordially coöperated with the health authorities in the matter. Prizes have also been awarded by the sanitary committee.

The City of Manchester.—The provision for the isolation of small-pox in connexion with Manchester is, Dr. J. Niven reports, inadequate, and the sanitary committee recently attempted to procure a site at Carrington Moss and to erect a hospital thereon at a total cost of some £60,000. The scheme, however, failed to meet with the approval of the Local Government Board, and a proposal to take the project to Parliament did not receive the support of the ratepayers. In dealing with the several channels by means of which scarlet fever may be spread Dr. Niven lays stress upon its propagation through excreta in contaminated soil, and he thinks that the seasonal curve of scarlet fever supports this thesis. The phenomena of "return" cases can, Dr. Niven claims to have established, be entirely done away with by means of a period of separation in convalescent wards for at least 10 days prior to discharge. Dr. Niven briefly discusses the views set forth by Dr. C. K. Millard as to the influence of isolation hospitals, and he (Dr. Niven) is inclined to conclude that, *so far as infection at home is concerned*, the results of isolation hospitals are disappointing. He, however, points out that in so far as infection outside the home is concerned non-removal to hospital is likely to result in the spread of infection in consequence of inefficient isolation or of premature return to school. Enteric fever was largely spread in Manchester during 1900 by means of cases of the disease which were unrecognised at the time, but which were detected subsequently by means of Widal's reaction. As Dr. Niven observes, there are many mild cases of the disease which are never brought under observation at all. In no less than 62 cases out of a total of 378 there was a history of direct personal infection. With regard to the influence of shell-fish in causation, it has to be recorded that the patients in three cases had consumed mussels taken from the estuary of the Conway. There were 60 cases of typhus fever brought to light in Manchester during 1900, and Dr. Niven points out that with the present depressed condition of trade there may be difficulty in keeping this disease under control. As regards phthisis, 1573 fresh cases were notified in 1900; of these, 587 were notified from union hospitals or by district medical officers, and 446 from hospitals and dispensaries not connected with the Poor-law. After February, 1900, private medical practitioners were invited to notify, and as a result 540 such notifications reached the medical officer of health before the end of the year. In connexion with the influence of houses occupied by consumptive persons it may be mentioned that certain persons in Manchester were possibly infected by living next door to already invaded houses. This association has already been noticed by Flick in Philadelphia and by Biggs in New York. Dr. Niven embodies in his annual volume the reports by Dr. Harold Coates as to his investigations in respect of the dust of infected houses. Dr. Coates's researches confirm those of Cornet, and accentuate the importance of the disinfection of the rooms of tuberculous patients both during life and after death. Doubtless, dried sputum as also the drops of moisture expelled from the mouths of phthisical persons during coughing are the two most potent causes of the spread of this disease, but it is difficult to determine the relative magnitude of each of these factors.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6471 births and 4677 deaths were registered during the week ending Nov. 23rd. The annual rate of mortality in these towns, which had been 19·7 and 19·4 per 1000 in the two preceding weeks, rose again to 21·3 per 1000 last week. In London the death-rate was equal to 22·3 per 1000, while it averaged 20·6 in the 32 large provincial towns. The lowest death-rates in these towns were 12·6 in Huddersfield, 12·9 in Halifax, and 14·7 in Croydon and in Derby; the highest rates were 24·7 in Burnley, 25·0 in Oldham, 25·4 in Salford, 28·2 in Wolverhampton, and 28·4 in Norwich. The 4677 deaths in these towns last week included 473 which were referred to the principal zymotic diseases, against 442 and 427 in the two preceding weeks; of these 473 deaths 143 resulted from measles, 82 from diphtheria, 61 from diarrhœal diseases, 58 from "fever" (principally enteric), 57 from scarlet fever, 50 from whooping-cough, and 22 from small-pox. No death from any of these diseases occurred last week in Derby; in the other towns they caused the lowest death-rates in Plymouth, Bristol, Preston, Bradford, and Gateshead, and the highest rates in West Ham, Norwich, Salford, and Blackburn. The greatest mortality from measles was recorded in Wolverhampton, Norwich, Manchester, Oldham, Blackburn, Huddersfield, and Sheffield; from scarlet fever in Cardiff, Oldham, and Sunderland; from whooping-cough in Wolverhampton, Leicester, and Newcastle; and from "fever" in Salford, Sheffield, and Sunderland. The 82 deaths from diphtheria included 37 in London, eight in West Ham, four in Leeds, three in Birmingham, three in Leicester, three in Salford, and three in Sheffield. Twenty-two fatal cases of small-pox occurred in London, but not one in any other of the 33 large towns. There were 396 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Nov. 23rd, against 284, 297, and 368 at the end of the three preceding weeks: 141 new cases were admitted during the week, against 169, 62, and 113 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3331 and 3353 at the end of the two preceding weeks, had further declined to 3337 on Saturday last; 379 new cases were admitted during the week, against 425, 380, and 376 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 327, 445, and 477 in the three preceding weeks, further rose last week to 582, and were 176 above the corrected average number. The causes of 51, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bradford, Sheffield, and 11 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Salford, Gateshead, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·7 and 19·9 per 1000 in the two preceding weeks, rose again to 21·3 per 1000 during the week ending Nov. 23rd, and corresponded with the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Paisley and 18·6 in Edinburgh to 24·2 in Dundee and 25·2 in Perth. The 680 deaths in these towns included 30 which were referred to diarrhœa, 29 to measles, eight to "fever," six to scarlet fever, six to diphtheria, and six to whooping-cough. In all, 85 deaths resulted from these principal zymotic diseases last week, against 90 and 72 in the two preceding weeks. These 85 deaths were equal to an annual rate of 2·7 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 32, 22, and 22 in the three preceding weeks, rose again last week to 30, of which 14 occurred in Glasgow, five in Dundee, four in Aberdeen, and three in Leith. The deaths from measles, which had been 24 and 18 in the two preceding weeks, increased to 29 last week, and included 24 in Glasgow and four in Dundee. The fatal cases of "fever," which had been 16 and 12 in the three preceding weeks, further declined last week to eight, of which five were registered in Glasgow. The deaths from scarlet fever, which had increased from four to eight in the two preceding weeks, declined again to six last week, and included four in Glasgow. The fatal cases of diphtheria, which had been six and nine in the two preceding weeks, decreased last week to six, of which two occurred in Edinburgh. The deaths from whooping-cough, which had been five, 16, and three in the three preceding weeks, rose again to six last week and included five in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 133, 162, and 190 in the three preceding weeks, declined again last week to 177, and but were 21 in excess of the number in the corresponding period of last year. The causes of 25, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·7, 23·2, and 23·9 per 1000 in the three preceding weeks, declined again to 23·8 per 1000 during the week ending Nov. 23rd. During the past four weeks the death-rate has averaged 23·4 per 1000, the rates during the same period being 19·8 in London

and 17·7 in Edinburgh. The 171 deaths of persons belonging to Dublin registered during the week under notice were within one of the number in the preceding week, and included nine which were referred to the principal zymotic diseases, against 19, five, and six in the three preceding weeks; of these, four resulted from "fever," two from diphtheria, two from diarrhœa, and one from whooping-cough. These nine deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rates during the same period being 2·0 in London and 1·1 in Edinburgh. The deaths referred to "fever," which had been five, two, and none in the three preceding weeks, rose again last week to four. The two fatal cases of diphtheria showed a decline of one from the number in the preceding week. The two deaths from diarrhœa corresponded with the number in each of the two preceding weeks. The 171 deaths in Dublin last week included 28 of children under one year of age and 46 of persons aged upwards of 60 years; the deaths of infants showed a marked decline, while those of elderly persons slightly exceeded the number in the preceding week. Three inquest cases and three deaths from violence were registered, and 58, or more than one-third, of the deaths occurred in public institutions. The causes of 15, or nearly 9 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

Royal Navy Medical Service.

THE following appointments are notified:—Staff Surgeon H. W. Macnamara to the *Albion*. Surgeons: E. Cox to the *Mars* and G. M. O. Richards to the *Wildfire*, additional.

Civil Practitioner W. McLorinan to be Surgeon and Agent at Cushendun and Cushendall.

Royal Army Medical Corps.

Captain W. A. Ward is returning to South Africa as medical officer in charge of 7th Hussars, sailing from Southampton on Nov. 30th in the s.s. *Templemore*. Surgeon-Captain G. Melville, A.M.R., has assumed temporary medical charge of troops, station hospital, &c., at Glencorse, and Surgeon-Captain T. E. Stuart, A.M.R., has assumed temporary medical charge of troops, station hospital, &c., Perth. Major S. O. Stuart has embarked for South Africa.

Volunteer Corps.

Artillery: 3rd Lancashire: Surgeon-Captain E. Haworth resigns his commission. 1st Midlothian: Surgeon-Lieutenant-Colonel P. A. Young resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. *Rifle:* 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment: Surgeon-Captain L. E. Shore resigns his commission; Henry Buckley Roderick to be Surgeon-Lieutenant. 1st Volunteer Battalion the Highland Light Infantry: James Fulton Findlay to be Surgeon-Lieutenant.

South African War Notes.

Surgeon-Lieutenant-Colonel C. R. Kilkelly, Grenadier Guards, principal medical officer of the Imperial Yeomanry Hospital at Elandsfontein, in his report respecting the patients in hospital, states that four officers and 104 non-commissioned officers and men remain, the total treated in that branch of the Imperial Yeomanry Hospitals up to Oct. 31st being 436 patients. Mr. J. G. Hamilton, the honorary civilian director of the Imperial Yeomanry Hospitals, having just returned from Africa, a committee meeting will be held during the second week in December, when he will make a report to the committee on the work done by the various branches of the Imperial Yeomanry Hospitals and the position of the Elandsfontein branch, which continues in full operation.

South African Affairs.

We think that it will not be denied that under our system of Government there is a tendency to criticise and to decry our own methods and efforts in almost any given direction and to draw contrasts, which are often needlessly unfavourable to ourselves, between them and those of other countries. At least, it has been so in the present war. Things rectify themselves, however, in time; they assume their relative position and proportions to one another and juster judgments are reached. After every allowance has been made for want of preparedness and for the blunders and mistakes which have been made at home and in South Africa it must be admitted that the old patience and doggedness of the race have undergone no change, that the military strength which the British empire has been able to put forth has had the effect of creating no little astonishment and envy on the part of experts abroad where conscription is the rule. Nor can anyone say that there has been any decadence in the fighting power of our soldiers, whose behaviour and humanity under exceptionally trying circumstances will certainly bear to be compared with those qualities in any other army in the world. We are glad to notice that these facts are asserting themselves, with the effect of strengthening public confidence. The news from the theatre of war, too, is quite as satisfactory as could be expected considering the exceptional and irregular conditions under which military operations are being carried on. The health of the troops is, on the whole, satisfactory, notwithstanding that, as might be confidently expected must be the case, there is still a certain amount of enteric fever present and diseases incidental to field service and camp life. A regular and steady supply of reinforcements is being sent out from this country to South Africa and, as we trust and believe, the sick and convalescent in hospitals as well as their healthy comrades outside them, despite their hard and fatiguing work in the field, may be reminded by the receipt of various tokens of the approaching Christmas that they are not forgotten by those at home.

Royal Navy List, Diary, and Naval Handbook for 1892.

This is the fifth issue of an excellent diary for all members of the naval service, as well as for others interested in our first line of defence. The diary portion of the book is arranged so as to present one whole page to each day, while space is also apportioned for the entry of drills, &c. The usual calendars, with astronomical ephemeris for each month of 1902, is given, together with useful tables and notes. There are also several articles and notes of general interest, including the naval progress of the year with a comparative table of the battleships of the naval powers. The list of war medals and orders conferred upon officers of the Royal Navy and Royal Marines, together with the colours of the medal ribbons, will be found useful and interesting. Messrs. Witherby and Co., 326, High Holborn, are the publishers and the price of the Diary and Handbook is 3*s.* net.

The Reorganisation of the Army Medical Services.

On the receipt of the report of Mr. Brodrick's War Office Committee in India it immediately received attention on the part of the lay and medical press of that country, with the result that the impressions derived from its perusal are unfavourable to the scheme which it sets forth. There are, of course, many matters about which the receipt of further information is awaited in view of clearing up existing doubts and misgivings; the chief points, however, which are taken up or adversely criticised in the Indian press are, speaking generally, those which have been commented upon in this country—such as the questions of promotion, the terms and rates of retirement generally, and of optional retirement at 20 years in particular, the proposed institution of a number of examination tests and the inadequacy of such tests for their intended purpose, doubts as to the appointment, constitution, and workability of an advisory board, the exact position and pay of medical officers serving in India, and the effect which the new rules in regard to the proposed increased rates of pay will have upon officers of the Indian Medical Service, and so forth. The report of the committee is still but a report, and there is ample time for Mr. Brodrick to give all these points every consideration which, we venture to think, he will wisely do if he desires his new scheme to succeed.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on Nov. 21st the M.B. degree was conferred on O. F. F. Grünbrum, Trinity; T. W. S. Paterson, Caius; and (with B.C.) J. H. P. Fraser, Jesus. Dr. L. Humphry has been appointed University Lecturer in Medicine in succession to Dr. MacAlister.

Correspondence.

"Audi alteram partem."

THE ANNUAL MEETING OF FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—The consistent support which you give to the movement for re-establishing the rights of the Members of the Royal College of Surgeons of England deserves their most hearty thanks. Ours is an essentially practical profession, and if the Members do not come in large numbers to the annual meeting at the College, it is clearly because they are tired of assisting at a solemn farce. Resolutions are yearly passed almost unanimously, and as regularly the Council informs the mover and seconder that "it is unable to accede to their request," or some such formula. The fact is that the basis of these meetings is highly artificial; they are carefully deprived of all power and influence, and they only afford the Council an annual opportunity of snubbing those Members who take the trouble to attend them. The Council never brings forward any subject of interest to the College or the profession, but merely presents its printed report, as to which the President of the year says a few perfunctory words. It is well known that but for the resolutions formulated by the "Society of Members" there would have been no business before any of the meetings which have been held.

I do not advocate the abolition of these meetings, but I suggest that they be placed on a different footing. Let the Council itself bring forward matters on which it desires to hear the opinions of the Fellows and Members. Some such must occur every year. At present there is the difference with the General Medical Council over the recognition of scientific institutions. It is referred to in the report both last year and this, but when we bring forward motions bearing on the question we are asked to withdraw and told that the matter is *sub judice*. It would be unreasonable to expect the Council to regard resolutions passed at the meetings as binding, but let it undertake to treat them with respect and consideration, especially if repeated from year to year. Let it endeavour to encourage the attendance of Fellows and Members by advertising the meetings well and thoroughly, and let the attendance of the Council itself be an example to the rest of the corporation. Last year and this only seven members of Council out of 24 were present. But if the Members do not care to attend the meetings as at present conducted, many of them still take an interest in their College and do not abate one whit of their demand that they shall be represented on its Council. In proof of this I may point to the facts that the "Society of Members" has doubled its numbers during the current year, and that more than 2500 applications from Members have been received at the College during the last few months for copies of the annual report.

I am, Sirs, yours faithfully,

Nov. 25th, 1901. W. G. DICKINSON.

THE DANGERS OF A COMMON COLD.

To the Editors of THE LANCET.

SIRS,—Your correspondent Dr. Prosser White truly remarks that the question whether colds are produced by a chill or by one of the many manifestations of the growth of specific *materia morbi* is one awaiting the patient investigations of the bacteriologist. But might not some effort be made to differentiate the various sorts of "cold" clinically and thus assist and guide the bacteriologist? At present the profession and the public have no definite ideas on the subject. Until some better understanding is arrived at as to the difference between an infectious and a non-infectious cold it would be rash to teach that a sufferer "is an immediate source of perilous infection."

It seems improbable that simple exposure to cold can produce a specific poison, although it may be so. There is the curious fact that nasal catarrh is almost unknown within the Arctic Circle, but this may be due to a direct action of continuous cold on the mucous membrane and not to the absence of the usual microbes. It is very probable that there are at least two quite distinct "colds," the one due to exposure and the other to infection, but that as they have symptoms somewhat similar they are confounded by both medical men and the public. The simple cold may predispose to an attack of infectious cold and thus the confusion is intensified. If we could diagnose one kind from the other, then some effort might be made to isolate the subjects of the infectious kind: but what would Dr. Prosser White think if all his patients rejected him as "perilously infectious" because he had a slight nasal catarrh? I fancy distinctions something after the following manner might be drawn.

The simple cold (1) comes on immediately after exposure to cold or exhaustion, or more commonly both combined; (2) is progressive in intensity, but does not tend to spread; (3) produces very little constitutional disturbance; and (4) is followed by no debility.

The infective cold (1) comes on after attending a crowded assembly or is epidemic in a household: (2) suddenly attacks a single point and spreads therefrom; (3) causes considerable constitutional disturbance, rise of temperature, aching of limbs, &c.; and (4) is followed by more or less debility.

In influenza the constitutional symptoms come on suddenly, but the catarrh is only secondary. Until some trustworthy method of diagnosis is discovered I do not think we had better teach the infectiveness of the common cold, for the public is slow to learn, but slower to forget, and we may condemn generations of sufferers to a useless quarantine.

I am, Sirs, yours faithfully,

Ilfracombe, Nov. 11th, 1901. O. CLAYTON JONES.

THE TEACHING OF MEDICAL PHYSICS.

To the Editors of THE LANCET.

SIRS,—It is to be hoped that the General Medical Council will not commit themselves to the retrograde step of consigning the teaching of physics, biology, and chemistry to non-medical schools. Referring to my own subject I may point out that there may be all the difference in the world between the elements of physics as taught even in the best schools and in medical colleges. In the former we shall have schoolboys exercised in dynamics and in arithmetical questions on falling bodies, with a little sound, light, heat, and electricity thrown in, while in the latter the student will be taught those branches of physics which will be of most value to him in his future professional career. Such a course should be essentially of an experimental and practical nature, comprising the elements of sound, light, heat, and electricity. To try to cram these along with a complete course in dynamics into three months is to attempt an impossible task. In Surgeons' Hall we study after a little elementary dynamics the laws which govern the flow and pressure of liquids in uniform and in dilated tubes (aneurysm, the pulse). In the subject of light particular attention is paid to refraction, spectrum analysis (the blood, chemical and heat rays), and polarisation; in heat to thermometers, hygrometry, and calorimetry; in electricity to static electricity, batteries, accumulators, galvanometers, Ohm's law, magnetism, and the induction coil, not omitting the Roentgen rays. But I am only touching the fringe of the subject. Every day sees some further advance in scientific medicine: the use of electricity in medicine and surgery is constantly extending: we have the Roentgen rays, Finsen rays, light baths, and high frequency currents, and yet instead of helping the student to get such a grounding in the physics of these subjects that he may be able to understand and apply them properly in his future practice, the General Medical Council are thinking of reducing the study of them to a vanishing point by relegating them to schools and schoolboys. A course of medical physics can only be satisfactorily given by a teacher who has had both a scientific and medical training.

I am, Sirs, yours faithfully,

DAWSON TURNER,
Lecturer on Physics at Surgeons' Hall.

Edinburgh, Nov. 20th, 1901.

SCHOOL PUNISHMENTS.

To the Editors of THE LANCET.

SIRS,—I have been very interested in the correspondence which has lately appeared in THE LANCET with reference to the above subject. While there is much to commend many of the views which have been put forward I do not

think a sufficient case has been made out for the adoption of a special system or the abolition of any of the methods which have been discussed. At the present day we have become such victims to fashion that it permeates into our lives and affects our actions more than we care to admit. Religion itself is not free from its effects. In the legitimate branch of our own profession it exerts a baneful influence and on the illegitimate side the harm it does is appalling. Yesterday it was Count Mattei, to-day it is the violet leaves, and to-morrow who knows what it will be? We must be careful in considering the punishment of our young people not to allow ourselves to be swayed by such an influence.

In choosing methods of punishment I cannot help thinking that it would be a wise plan to endeavour as far as possible (if I may use a well-known phrase) "to make the punishment fit the crime." For instance, while, on the one hand, I should not approve of a form of punishment which kept a lad indoors and so deprived him of the necessary fresh air and physical exercise, on the other hand it appears to me that if a boy fails to learn his lesson the natural punishment is to keep him in after school hours while he does learn it. It is probable that instead of devoting the time he should have devoted to the preparation of his lesson he was playing about, perhaps out-of-doors, so that in the end you will not deprive him of his necessary exercise. Of course, in such a system it is essential that the master should sufficiently gauge the capacity of his pupil so that he may not be set a task beyond his ability. Corporal punishment should be reserved for really serious sins, such as untruthfulness, theft, immoral practices, &c., and should be administered with some degree of comparison to the offence. No one, I think, can defend the system of ear-boxing, pinching, pin-pricking, or roasting, and the old custom of slashing boys on the hands is equally to be condemned. It is far better for their bodies and more humiliating to their minds if the punishment is inflicted upon that portion of their body which nature appears to have specially designed for that purpose. The object of this punishment is to produce pain without damaging the soft parts, consequently it should never be performed with a fine cane, which is liable to cut the skin, nor should it be applied to the skin without any covering or in too rough or too extensive a manner. If the recipient is made to kneel down and a good thick cane be used half a dozen smart stripes could rarely do harm. Boys have a great idea of justice, and providing that this is exercised they will generally accept their punishment in a proper spirit and profit by it, but I should like in conclusion to put in a plea for the personal factor. Every boy is a study in himself, and if a master observes his pupils as he ought he will soon ascertain that a form of punishment which is most suitable to one boy is totally unsuited to another. While I should like to feel that all could be dispensed with I am sure that it would be most undesirable to fix upon any one method, and the wise master is he who makes use of them all in the cases to which they are applicable.

I am, Sirs, yours faithfully,

J. LIONEL STRETTON,
Senior Surgeon to the Kidderminster Infirmary and Children's Hospital.

Nov. 26th, 1901.

PAUPER LUNACY FEES.

To the Editors of THE LANCET.

SIRS,—I commenced practice in this town in May, 1880; my predecessors then had been in practice many years, probably some of them 40 years. I at that time accepted the proffered fee of £1 11*s.* 6*d.* for examining and certifying pauper lunatics. This I presumed was the usual fee, as I was not likely to be given a higher fee than my predecessors had been in the habit of accepting. This fee has been paid ever since until this year in the neighbourhood of this town. At a town distant about seven miles the fee has been one guinea. On August 2nd the following circular letter was forwarded to every magistrate:—

DEAR SIR,—I am directed to inform you that the guardians of this union have had under consideration the question of the fee usually allowed by the justices to medical practitioners for certifying as to the state of mind of an alleged lunatic, which fee the guardians have to pay; and on Saturday last they directed me to inform every magistrate that in their opinion the amount usually allowed—viz., £1 11*s.* 6*d.*—is too high for ordinary cases. Yours faithfully,

——, Clerk.

You will observe, Sirs, that the fee of £1 11*s.* 6*d.* is in this letter admitted to be *usual*. Subsequently to the knowledge of this circular letter the following was sent to the medical men practising in this union:—

DEAR SIR,—A resolution has been passed by the —— Guardians to apply to the magistrates to reduce the fee payable to medical men for certifying pauper lunatics from £1 11*s.* 6*d.* to £1 1*s.* May I add your name to the list of medical men practising in the union who are determined to resist this reduction and refuse to certify for less than a fee of £1 11*s.* 6*d.*? If so will you sign and return this card?

The replies were 20 in favour, four doubtful, and one against. On Oct. 31st, at a meeting of medical men, the following motion was passed unanimously:—

That we, the medical men practising in the —— Union, do in future refuse to take a less fee for certifying pauper lunatics than £1 11*s.* 6*d.* (one guinea and a half) and that a copy of this resolution be forwarded to the Editors of the *British Medical Journal* and THE LANCET.

What we wish to elicit is your opinion on our case with, perhaps, comments on the action of the one practitioner who refused to join us. I regret that only nine attended the meeting, but the others were unfortunately prevented. May I add that the magistrates who so far have allowed the guinea fee only are likewise guardians. On the other hand, when the circular in question was laid before the bench of magistrates then sitting it was unanimously decided that the usual fee was *not* too high and a letter from the chairman of the bench to a medical man on this question is as follows:—

Justice's Clerk's Office, Town-hall, ——, Nov. 5th, 1901.

Re Examination of Lunatic.

DEAR SIR,—The chairman ..... has handed me your letter to him of the 3rd inst. touching this matter and has directed me to write you in reply thereto. While the magistrates consider the amount of allowance to the medical man is a matter in the discretion of the justice conducting the examination, after consideration of the circumstances peculiar to each examination they think the amount, £1 11*s.* 6*d.*, seeing that the justice has to rely almost implicitly on the medical certificate, is not an excessive fee, more so as the medical man is frequently called upon to exercise minute inquiry and much caution before giving his certificate, which inquiry and caution it is desirous to encourage.

Yours obediently,

——, Clerk.

I wish to add it is feared that the abstention of the one medical man may seriously endanger the success of the combination; the reason he gives for doing so is that he has entered into an "agreement" with a relieving officer to accept the fee of one guinea.

I am, Sirs, yours faithfully,

Nov. 15th, 1901. R. W.

*** We understand the matter to be governed by the Lunacy Act of 1890, Section 285, Sub-section (1). The fee is to be "such reasonable remuneration as the justice thinks proper." We have no hesitation in saying that the fee of £1 11*s.* 6*d.* is not unreasonably high, and that the letter of the clerk to the justices states precisely and with admirable exactness the reasons why it is not excessive. The guardians may have the right to lay before the magistrates any objections which they have to paying the amount usually allowed in the district, but the matter is absolutely in the magistrates' discretion. We must point out also that although it is incumbent on the guardians to consider the public purse it is primarily their duty to consider the public welfare, or rather the welfare of those persons for whom the medical examination to be remunerated is to be provided. The "minute inquiry and much caution" to which the clerk to the magistrates refers is a necessity in such cases and the fee must be such that self-respecting medical practitioners will accept it. The certificates in question should not be given after hasty examination or accepted from a practitioner willing to undersell his colleagues.—ED. L.

THE FORTHCOMING ELECTION OF DIRECT REPRESENTATIVES.

To the Editors of THE LANCET.

SIRS,—With regard to the position of parochial medical officers in Scotland, for 30 years as a parish medical officer and since I have ceased to hold such a post I have in season and out of season advocated that my late colleagues should have the right of appeal against dismissal to the Scottish

Local Government Board. I mean to support the agitation in favour of this and other points of their programme of reforms. But such questions cannot be dealt with by the General Medical Council as at present constituted. It is altogether beyond the limit of their duties, which are very strictly defined by Acts of Parliament.

I am, Sirs, yours faithfully,

WILLIAM BRUCE,
Direct Representative for Scotland in the General Medical Council.

The Castle, Dingwall, Nov. 24th, 1901.

To the Editors of THE LANCET.

SIRS,—In my capacity of candidate for the direct representation of the medical practitioners of Scotland on the General Medical Council I have received a letter from Dr. J. F. D. Macara of Durness, Sutherlandshire, inclosing copy of a petition presented to Parliament last session by the Poor-law medical officers of parishes in the Highlands and Islands of Scotland.

In reply I beg to state: (1) that I am strongly of opinion that such a fixity of tenure of office should be afforded to Poor-law medical officers in Scotland by the right of appeal to the Local Government Board of Scotland as is already enjoyed by Poor-law medical officers in England and Ireland; (2) that I am in entire sympathy with all the other points referred to in the petition; and (3) that I would endeavour to support these reforms in any practical way possible.

I am, Sirs, yours faithfully,

CHARLES E. ROBERTSON, M.D. Glasg.

Glasgow, Nov. 25th, 1901.

To the Editors of THE LANCET.

SIRS,—As a way out of the *quæstio vexata* about midwives I suggest that we should not have "registered midwives," thinking that qualified ones should be on an official "list of certified midwives." Parliament and the public will not understand or tolerate the term "obstetric or midwifery nurses," but will insist on employing "midwives"; there *is* much in a name. Our profession should guide (it cannot drive) our legislators. If we do not support the necessities of the public, which needs control over ignorant nurses, we shall find our aspirations contemned. Entrance to our profession, it seems to me, should be limited to tri-portal—London, Edinburgh, and Dublin; a uni-portal system would not be workable, as putting heavy expenses on Scotch and Irish students, not to mention opposition by their examiners. I am, Sirs, yours faithfully,

STANLEY L. HAYNES, M.D. Edin.

Malvern, Nov. 25th, 1901.

THE ETHICS OF A PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—I desire to associate myself with the protest that Dr. W. H. Cheetham has made in THE LANCET of Nov. 23rd, p. 1445, against the recent action of the Association of Public Vaccinators. It was with the greatest regret that I read the communication which the secretary addressed to the press and which appeared to me to savour of scarcely veiled advertisement. I am, Sirs, yours faithfully,

THOMAS F. RAVEN,
Public Vaccinator.

Nov. 25th, 1901.

IMPRESSIONS ABOUT CHLOROFORM AND ETHER.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the paper of Sir William Mitchell Banks in THE LANCET of Nov. 16th. I, too, was a dresser of Professor Syme at the time he mentions and also intimately associated with Sir James Simpson. With regard to the immunity from death under the administration of chloroform in midwifery practice no doubt Sir W. M. Banks is correct in his suggestions that it depends much upon the facts of the patients being at the best and most vigorous period of life, and that they are usually placed on the left side during the time it is given so that the tongue cannot fall backwards. There is another factor of some moment in the calculation in addition to the circumstance that deep anæsthesia is not so often required—namely, the uterine contractions; these produce intermittent pain which rouses the patient and causes a marked reflex influence. The cause of danger in midwifery practice in the use of chloroform is when this contraction is absent—either in operative cases where the anæsthesia is profound, or in atony of the uterus where contraction does not exist. It is in these cases that hæmorrhage is apt to occur and where chloroform is often reputed to be the cause. No doubt under such conditions it becomes more dangerous. Yet in a very large practice I have never seen any death from its use, or more than temporary risk when given with due precaution. If Simpson's few and simple rules were widely known and acted upon the confidence in the administration of chloroform in midwifery practice would be firm and stable; no—or a minimum of—apprehension would exist. One of these, Sir W. M. Banks wisely makes a point of—namely, quietness around the patient during the administration. One more element is important in cause and effect—patients in midwifery practice look forward hopefully to relief, and ask, even clamour, for chloroform; there is none of the dread and fear which are often associated with surgical operations—a state of mind fostered and excited by reports in the lay press of such lamentably frequent occurrence.

I am, Sirs, yours faithfully,

Birmingham, Nov. 20th, 1901. EDWARD MALINS.

To the Editors of THE LANCET.

SIRS,—In his paper on the above subject in THE LANCET of Nov. 16th, p. 1323, Sir W. M. Banks refers to dry friction of the lips and face as a method of stimulation and makes the following extraordinary statement: "The 'dodge' is so simple and so devoid of all scientific parade that I do not suppose any high-class anæsthetist could be got to use it." It is not very clear why Sir W. M. Banks should suppose that expert anæsthetists reject what is useful merely because it happens to be simple; as a matter of fact, the little manœuvre in question is habitually used by anæsthetists, and, in London at any rate, is preached as well as practised by them. If Sir W. M. Banks will refer to the latest edition of Dr. F. W. Hewitt's work on "Anæsthetics and their Administration" he will find his "dry shave" frequently alluded to and recommended as a valuable respiratory stimulant.

I am, Sirs, yours faithfully,

J. HENRY CHALDECOTT.

Welbeck-street, Cavendish-square, W., Nov. 27th, 1901.

THE ENGLISH LANGUAGE.

To the Editors of THE LANCET.

SIRS,—I was pleased to learn from a footnote to a letter entitled, "A Question of Spelling" in THE LANCET of Nov. 9th, p. 1298, that it is your desire to encourage the use of good English among your contributors and correspondents. I do not suppose that we are, as a profession, less intimate than others with our mother tongue or have greater need of instruction in the art of writing, but I number among my acquaintances several medical men who seem to find the pen a much less facile instrument than the knife, and give expression to their thoughts in language which is always more or less crude and clumsy, and is sometimes scarcely intelligible. Not very long ago I saw in the possession of a nurse a testimonial written by one of these gentlemen, in which she was described as "above the average in absolute trustworthiness." The same gentleman, a surgeon of some local repute, invariably speaks of the "gritty" instead of the "gristly" feeling of a scirrhous cancer; to him it is much easier to remove such a tumour than to describe it in words accurately conveying his meaning.

You rightly call attention to that barbarism "try and," but you make no reference to an error much more grave, much more common, and found even among professional writers, in whom it is quite unpardonable: I mean the use of "either" for "each." In the "Manual for the Medical Staff Corps," in the instructions for moving helpless patients, there occurs the following sentence: "An orderly shall take up a position on either side of the bed." I read that sentence literally, and concluded, although I thought it an unwise economy of labour, that an orderly—one orderly—would place himself at that side of the bed from which he could the more easily and conveniently handle his patient, but on proceeding I was surprised to discover that two orderlies were employed, one on each side. The author might have avoided ambiguity

by the use of correct English. In the same book a misplaced comma so alters the meaning of a sentence that, while undergoing an examination as surgeon of volunteers, I felt constrained to call my examiner's attention to the mistake. He, however, failed to see anything wrong; a comma here or there was of no importance.

Another error, which is becoming daily more frequent, is the combined use of "ago" and "since." Quite recently, in one of our monthly magazines, a well-known London writer and preacher introduced an article with the words: "It is now some time ago since." I will not vouch for the verbal accuracy of my quotation, but it is sufficient to show the mistake to which I refer.

I am, Sirs, yours faithfully,

Gourock, Nov. 15th, 1901. A. LEITCH.

THE AFTER-COMING HEAD; PREVENTION OF ASPHYXIA.

To the Editors of THE LANCET.

SIRS,—With your permission I would like to thank Mr. George W. Ord for his letter in THE LANCET of Nov. 23rd, 1901, p. 1449, and at the same time to reply shortly to some of his remarks and criticisms. First of all I wish to point out to him that my communication was essentially, as its title implied, a historical note, and I did not discuss therefore in any detail the methods of treating cases of delay of the after-coming head; had I done so he would no doubt have understood much more clearly what my "precepts" actually are with regard to these cases. Mr. Ord objects to my saying that "the passage of a catheter or special tube into the child's mouth when the head is lying high up in the pelvic cavity is only likely to lead to a waste of valuable time," because, as he says, "it would be utterly unnecessary inasmuch as the circulation of the cord would not be in any way obstructed." With this last statement I entirely disagree. The danger of pressure on the cord in breech presentations begins when the after-coming head is passing into the pelvic brim. At this stage of labour the child's mouth, especially in the most dangerous class of cases where the arms and head are extended, is at or even above the level of the brim of the pelvis, or at a distance measured along the posterior vaginal wall of some six to seven inches from the vulva. It is the general custom amongst writers on obstetrics to use the terms "high up" or "low down" in the pelvic cavity to signify the relation of the child's head to the inlet or outlet of the pelvis, and this is the sense in which I used the phrase.

In many cases in which the danger to the child's life is at its maximum the pressure on the cord begins owing to extension of the arms before the head is able to enter the brim of the pelvis at all. Under these conditions the child's mouth is often at even a greater distance than from six to seven inches from the vulva and can only be reached with considerable difficulty. In all such cases the attempt to pass a catheter into the child's mouth will undoubtedly, as I have said, lead to a waste of very valuable time.

Mr. Ord next takes exception to my statement that "when the head is sufficiently low down in the pelvis to admit of air reaching the mouth if the perineum be retracted its immediate extraction should be a matter of little difficulty," and asks how do I "account for the high mortality of breech presentations if this assertion be true." The answer is a very simple one: these are not the cases which cause the high mortality. It is the cases where the head is arrested high up in the pelvis or even above the pelvic brim that are so fatal to the children. The danger to the child's life in a properly managed breech presentation where the head is arrested at the outlet of the pelvis mainly by the resistance of the soft parts is comparatively small; it is somewhat greater when the head is arrested in the cavity of the pelvis, and it is very much greater when the head is arrested at or above the pelvic brim. The introduction of a catheter or tube into the child's mouth is, therefore, most impracticable in the most dangerous class of cases. I am quite aware of the fact "that it is possible for the mouth to be well within reach of the finger and yet for the occipito-frontal diameter of the child's head to be fixed in one of the oblique diameters of the pelvis," *if the head is low down*, but this is by no means the case when the head is arrested high up, and Mr. Ord's remark, therefore, only applies to cases in which the head is arrested near the pelvic outlet. He apparently considers the application of forceps to the after-coming head a somewhat difficult operation. I can only say that in my experience it has never presented any special difficulty. I quite agree with Mr. Ord when he calls traction on the jaw "a most iniquitous proceeding" and "meddlesome midwifery." I must point out, however, that I did not recommend jaw traction alone, do not practise it, and always take special care to warn students of its dangers. What I did recommend was the well-known method which I shortly termed "combined shoulder and jaw traction"—a very different procedure. I must apologise to Mr. Ord for not stating more clearly what I meant. I foolishly thought that anyone sufficiently interested in the subject to read my paper would at once recognise the method alluded to. I see, however, that I was wrong. There are, as no doubt Mr. Ord is aware, many ways of assisting the delivery of the after-coming head. The best and most widely practised of these are known as the Mauriceau-Smellie-Veit method, and the Wigand-A. Martin method respectively. In the first, commonly called combined shoulder and jaw traction, the finger in the child's mouth is used to control the degree of flexion or extension of the head according to the requirements of the case and the traction is made by the fingers of the other hand on the child's shoulders, or if further help is necessary by an assistant pulling on the child's legs. In the Wigand-A. Martin method, especially applicable to cases where the head is at or above the pelvic brim, the finger in the child's mouth is used for the same purpose, but the head is made to enter or pass through the pelvis by pressure applied to it through the abdomen. I am not aware of the existence of any recognised method in which jaw traction alone is recommended, although, no doubt, it is often improperly employed in these cases.

Mr. Ord must excuse me if I protest strongly against his assuming that I mean one thing when I say another, or that I employ and recommend a mode of treatment which he no doubt very rightly terms "an iniquitous proceeding" and "meddlesome midwifery" when I do nothing of the sort. I quite admit that the problem is "to bring a living child into the world with the least possible amount of damage to it or the mother," but in many cases this problem can only be efficiently solved by delivering the child as rapidly as possible even at the risk of some danger to the mother. I shall be very glad to avail myself in suitable cases of the method recommended by Mr. Ord when it can be shown that its use has brought about that upheaval of statistics of mortality in breech presentations which he anticipates. Meanwhile I am quite content to allow "the waste of valuable time to exist only in my imagination." I shall certainly never waste it in actual practice in the employment of a method which I think of very little value in preference to the use of other methods which a fairly extensive experience of breech presentations has shown me to be both valuable and efficient.

I am, Sirs, yours faithfully,

Nov. 25th, 1901. GEORGE F. BLACKER.

To the Editors of THE LANCET.

SIRS,—I have read Dr. Blacker's "Historical Note" on "The Prevention of Asphyxia when the Birth of the After-coming Head is Delayed"[1] with a great deal of interest, as I had no idea that the treatment was so ancient. In a footnote in Ramsbotham's "System of Obstetrics" it is stated: "Meigs ('Treatise on Obstetrics,' p. 354) instructs that we should endeavour to preserve the child from suffocation by passing two fingers upwards until they reach the two maxillary bones and cover the nose; by doing this," he says, "the backs of the fingers pressing the perineum backwards serve to keep an open communication with the air and the child can breathe very well. I have kept," he continues, "a child alive in this way, breathing and sometimes crying, for 20 or 25 minutes before the birth of the head." Although Dr. Ramsbotham had more faith in *speedy* extraction than in keeping an "open communication" between the child's lungs and the external atmosphere, yet I think this practical suggestion of Dr. Meigs is one which should never be lost sight of by those who are engaged in obstetric practice.

I am, Sirs, yours faithfully,

C. H. L. JOHNSTON, M.D., L.R.C.S. & L.M. Edin.

St. John, New Brunswick, Nov. 2nd, 1901.

[1] THE LANCET, Oct. 19th, 1901, p. 1033.

MEDICAL MEN AND MIDWIVES' CASES.

To the Editors of THE LANCET.

SIRS,—As this is a subject which particularly affects general practitioners I hope you will allow me to make a few remarks on the very extreme views set forth by various gentlemen at pp. 1446 and 1447 of your last issue. During a period of 25 years devoted to general practice my almost invariable reply to casual midwifery calls has been an expression of regret that my regular engagements prevented me from attending such cases, as absence at one of them might make me unable to fulfil my obligations to those who had both moral and legal claims on me. In adopting this course I have also been influenced by the belief that septic infection occurs with unusual frequency in these chance cases, and I do not think it fair to expose regular patients to that increased danger. It would appear to me that gentlemen who are so ready to attend casual midwifery must either have very little other work, or must be placed in such a position that they are seldom called upon to carry into practice the principles they profess.

I am, Sirs, yours faithfully,

HENRY GEO. DIXON.

Canonbury-square, N., Nov. 25th, 1901.

DEGREES FOR LONDON MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—I beg to thank you for the sympathetic remarks contained in the leading article on "Medical Students and the London Schools" in THE LANCET of Nov. 23rd, p. 1425. If it was the universal opinion of all the leading physicians and surgeons in the capital of this empire that London students were under grave disabilities in 1886, surely the decision of the Crown was come to under some misconception of facts. Further, if disabilities existed then they are accentuated in the year 1901, the result being that the professional value of the College pass diplomas is approaching the vanishing point owing to the ever-increasing number of provincial universities. I submit that London with its 5,000,000 inhabitants, equalling that of Scotland with its four universities, should have at least one pass degree in medicine. I would point out that diplomates educated in Birmingham are admitted to the final examinations of the Birmingham University. Surely the Crown, being the "fountain of justice," would be only too ready to reconsider its decision of 1886 and give a verdict in favour of the students of its great capital more in keeping with the overwhelming evidence of the justice of our plea of being equitably dealt with.—I am, Sirs, yours faithfully,

FREDERICK W. COLLINGWOOD.

Wimpole-street, W., Nov. 21st, 1901.

THE OVERLOADING OF HORSES.

To the Editors of THE LANCET.

SIRS,—If you have space to spare I should like to supplement your humane remarks on this subject by calling attention to the sufferings of horses engaged in works where deep excavations are made, such as sewage, railway, and foundation works. The horses employed in removing the soil are first jagged by the bit in backing and then strained to their utmost in dragging heavy loads up a steep gradient of soft or slippery material. It would be well if inspectors of the Society for the Prevention of Cruelty to Animals were to visit the kind of works indicated.

I am, Sirs, yours faithfully,

Weymouth-street, W., Nov. 22nd, 1901. CHAS. W. CHAPMAN.

THE PHARMACEUTICAL SOCIETY: GENERAL MEDICAL COUNCIL ELECTION.

To the Editors of THE LANCET.

SIRS,—Our attention has been directed to Dr. Robertson's address published in your issue of 16th inst. The suggestion that the Pharmaceutical Society only prosecute doctors and not chemists is unjustified. We presume that Dr. Robertson had in mind the recent prosecution of a doctor for an offence against Section 17 of the Pharmacy Act of 1878. It is true that under this section of the Statute no chemist has yet been prosecuted in Scotland, but it is important to note that the prosecution against the doctor in question is the *first* directed in Scotland against a medical practitioner. Chemists, being specially trained in the selling of scheduled poisons, comply with the letter of the Statute. Moreover, as the chemists are all day engaged at their shops personally supervising their business, offences against Section 17 of the Statute within chemists' premises are practically unknown and not likely to occur. In doctors' shops, however, our experience leads us to say that the precautions attendant upon the sales of poison provided by Section 17 of the Pharmacy Act are not so carefully observed. This is caused, no doubt, by the facts: (1) that so many unqualified dispensers are employed by medical practitioners to conduct their shops; (2) the medical practitioners do not give their entire time and attention to the conduct of their shops as chemists do; and (3) doctors owning shops as a rule prefer that their names should not be on the label of articles sold in their shops, and their unqualified dispensers have neither the proper experience nor training to enable them to know what the provisions of the Statute demand. In this connexion it is of importance to note that the requirements of the Pharmacy Statutes and the conditions to be observed in retailing or dispensing scheduled poisons form no part of the curriculum for the medical practitioners' qualification, whereas they constitute one of the most important subjects of the chemists' qualifying examination.

We are, Sirs, yours faithfully,

P. MORISON AND SON,
Solicitors in Scotland to the Pharmaceutical Society of Great Britain.

4, Bank-street, Edinburgh, Nov. 22nd, 1901.

RASH AFTER TONSILLOTOMY.

To the Editors of THE LANCET.

SIRS,—As the appearance of a non-specific rash following operation for removal of tonsils and adenoids is somewhat unusual, although a number of instances have been recorded, the following case may be of interest.

I recently removed adenoid growths and enlarged tonsils from a boy, eight years old. Two days later the patient's chest, abdomen, back, and limbs were covered with a well-marked papular eruption. The face, hands, and feet were not affected. The rash caused no irritation and there was no rise of temperature or other constitutional disturbance. The eruption disappeared entirely in a couple of days and was not followed by any desquamation.

I am, Sirs, yours faithfully,

Kew. H. W. HENSHAW.

*** The value of our correspondent's communication would have been much enhanced if a few additional particulars had been furnished. Although the rash appeared after the removal of some adenoids and enlarged tonsils, yet we are hardly justified in ascribing it to the operation unless we are able to exclude other possible causes. For instance, the following questions might reasonably be asked:—Were any drugs administered? What anæsthetic was given? Had any change been made in the diet?—ED. L.

THE DIRECTION OF HAIR ON THE HUMAN ARM.

To the Editors of THE LANCET.

SIRS,—Many practitioners are engaged at present in the somewhat wearisome process of revaccination, and I would suggest an interesting matter for study in connexion with the numerous hairy arms met with among young adults which may somewhat enliven the work. With the naked eye or a lens it is easy to trace the hair-streams which are found at and about the insertion of the deltoid, a region which must at the present time be very familiar to most of us, and it must be admitted that the course taken by these hair-streams is singular and suggestive. It is hardly possible to suppose a simian ancestor of man from whom he can have inherited that singular slope of hair which is found on the upper arm of the young adult and which may easily be

traced with a lens in the infant. One is led, then, to speculate as to the cause or causes which can have produced the phenomena present, on that hypothesis, which is the only one allowed by current science, that man is the child of the monkey. Starting from that basis one can hardly take any other than a Lamarckian view as to the reason for the direction of hair, and the most obvious reason, indeed, the only one that I can see, for this would appear to be that man lies on his side during sleep for about a third of his natural existence, with his head and shoulders more or less supported by a pillow or its equivalent. A very slight consideration of the mechanics of this attitude shows a force acting for a third part of man's life which is exactly calculated to produce the direction of the hair-streams which is found to exist. These are very much as follows. On the distal half of the upper arm the hair-streams follow a simple and natural course, passing from the level of the insertion of the deltoid to the elbow very much in the long axis of the limb on all the surfaces. But on the proximal half a most unexpected change is present, so that the hair-streams rather sharply diverge from those of the distal half, and on the external aspect pass at first at right angles to the long axis and then rapidly curve towards the shoulder-joint until their direction becomes almost, and sometimes quite, a complete reversal of that found on the distal half. If one traces the streams of the external surface towards the axilla one finds them to be a continuation of those which emerge from the posterior border of the axilla. At the upper angle of the axillary fold the hair-streams also are found to pass almost directly towards the shoulder. It is only necessary to study the corresponding surfaces in a few different forms of apes and monkeys to see at once the striking differences between them and man in this respect.

I have directed attention to this limited field of observation as one open to the inspection of all and in numerous cases, and as one much under the influences of habit and so-called Lamarckian factors, seeing that phenomena so trifling are removed from the jurisdiction of any kind of selection or neo-Darwinian factors by the mere statement of the facts. This is only one of the numerous instances in the distribution of hair in man and the lower animals which point to "use-inheritance" being certainly possible and probably frequent. However intrinsically unimportant it may be considered, it comes under the sound principle that all the phenomena of nature are worthy of investigation and may be capable of interpretation. I am, Sirs, yours faithfully,

Blackheath, Nov. 5th, 1901. WALTER KIDD.

THE CINDERELLA OF THE PUBLIC SERVICES.

To the Editors of THE LANCET.

SIRS,—The worst paid and hardest worked of the public services is the Poor-law medical service. No one cognisant of the facts will dispute that statement. And one of the worst-paid portions of that service—if not the worst paid—when the services required of it are taken into consideration, is the medical staff of the London Poor-law infirmaries. To take the position of the medical superintendent first. He must be a sound surgeon, for nowadays all operations, major and minor, are done within the walls of the infirmary; he must be, it goes without saying, a good physician; he must know the details of infirmary administration and of the Poor-law thoroughly; in many cases he must be an expert on lunacy matters; he must have a sound knowledge of hygiene and be an expert in the recognition of the infectious diseases; he has to be acquainted more or less with all the special branches of medicine—obstetrics, gynæcology, laryngology, ophthalmology, &c.; and lastly, he must be able to lecture to the nursing staff on physiology, anatomy, and nursing. Withal he must be a man of infinite tact, patience, and industry, with an iron constitution, or his administration will be a sad failure. That one man should possess all these qualifications is obviously impossible, and the most striking fact about the service is the success with which so many of its members carry on their multifarious duties, for practically, even as compared with the scandals, so-called or otherwise, of voluntary hospitals, there are no infirmary scandals. And it is knowledge of this fact which in many cases induces boards of guardians to sweat their medical officers in a way they would not be allowed to sweat the members of a trade-union. The worst of the London boards in this respect are Shoreditch, Mile End, Fulham, and Camberwell. The two former pay their medical superintendents £300 and the two latter £325 per annum. The highest salary paid to any medical superintendent in London is £500. To realise how unjust are these salaries one has only to compare them with the salaries paid by the Metropolitan Asylums Board and the London County Council for less arduous and responsible work. Medical superintendents of the Metropolitan Asylums Board fever hospitals are paid £400, rising to £700, per annum; those of imbecile asylums are paid £600, rising to £800. The medical superintendents of London County Council asylums are paid £1000. The emoluments of all these officers are, with few exceptions, practically the same—viz., unfurnished house, coals, gas, and washing.

When we come to the position of the assistant medical superintendent the state of affairs is even worse. His salary is usually £100 or £120, rising by £10 annual increments to £130 or £150, and his prospects are none, for boards of guardians usually prefer to appoint outside men to the post of medical superintendent. They prefer a man with one year's experience in a Metropolitan Asylums Board hospital to a man with five years' experience as assistant medical superintendent to a London infirmary. Hence the man who likes the administrative work of a public hospital had much better enter one of the fever hospitals. He will be paid at the rate of £160, rising to £200, and will stand a much better chance of promotion either in the fever hospitals themselves or in the Poor-law infirmaries. The prospects of the junior medical officer are not worth discussing. These posts would never be held by a sane man except for the valuable experience which the holder gains.

There is one point it would pay boards of guardians to ponder over very carefully. A man in the position of medical superintendent of a London infirmary has innumerable opportunities of saving his board thousands of pounds in the course of a year without any detriment, or rather with advantage, to the infirmary. Does it strike the ordinary man as likely that the man who knows that his work is being exploited at a sum far below its market value, is going to take the trouble to safeguard the interests of the men who sweat him? This, of course, is a very immoral attitude, but it is undoubtedly the attitude of the ordinary intelligent citizen. It is a fact recognised by all intelligent, shrewd, and businesslike owners of successful industrial institutions. Their motto is, "Pay the highest price and get the best man possible and you will secure the most economical administration."

Now, is there any remedy for this state of affairs? Short of inducing the Local Government Board to fix minimal salaries for the medical officers there is only one. Let the medical profession boycott the London infirmary medical service. Let the example shown in respect of the Army Medical Service be followed with regard to the indoor appointments of the Poor-law medical service—a service the pay, prospects, and status of which are even lower than those of the Army Medical Service used to be. If this is done boards of guardians will soon be forced to fall into line with other public bodies and will be obliged to pay reasonable salaries to their medical officers. I would propose as minimal salaries for London £500, rising by annual increments of £50 to £700, for medical superintendents; £150, rising by annual increments of £25 to £250, for assistant medical superintendents; and £120 for the junior medical officer. Finally, all higher appointments, including the Local Government Board inspectorships, should be made by promotion in the service.

I am, Sirs, yours faithfully,

Nov. 20th, 1901. AN INFIRMARY MEDICAL OFFICER.

TIPPING THE NURSE.

To the Editors of THE LANCET.

SIRS,—The question at present uppermost in the medical world seems to be that connected with midwives; it certainly is one which requires very discreet treatment and consideration, but may I call your attention to a very much worse evil, and that is the practice of certain medical men (unfortunately for the profession far too numerous) of paying sums varying from 1s. to half the confinement fee or

more to the nurses in attendance who, to use their own words, make their living from "following the doctors."

General practitioners owe their practice to a great extent to confinements, since attendance at these times generally entails future attendance on the family, hence unscrupulous medical men make it a practice to tip the nurse in attendance handsomely in the hope (and more often there is an agreement on the subject) that she will recommend them to other people; further than this, it is by no means uncommon for the nurses to have a "supply" of the medical man's professional cards to distribute amongst her acquaintances (the General Medical Council may shortly have to issue judgment on one of these latter cases), and it naturally follows that so long as she can make a living out of these tips she will adhere strictly to her instructions not to let anyone else know.

A few weeks ago I personally suffered owing to a nurse being in attendance whom I did not tip and who is "run" by a medical man who is now in attendance in the house. Trusting you will see fit to insert this letter, to which my name obviously cannot be attached,

I am, Sirs, yours faithfully,

Nov. 19th, 1901. A MEDICAL PRACTITIONER.

*** We do not think that the practice of tipping the nurse is at all a widespread one. But it is so improper that we insert our correspondent's letter calling attention to it, and take the opportunity of saying that to make such pecuniary arrangements with nurses is grossly unprofessional conduct.—ED. L.

THE PLAGUE IN CONSTANTINOPLE AND THE NEAR EAST.

(BY THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

SINCE the date of my last letter to THE LANCET[1] several cases of plague and of suspected plague have occurred in Constantinople, and the appearance of the disease in Samsoun and Batoum on the Black Sea, its reappearance in Smyrna, and the development of cases on board certain steamers, such as the *Equateur*, the *Maria Teresa*, and the *Portugal*, all indicate a certain degree of activity in plague infection in the near East.

In Constantinople, after the case of Sept. 17th, already reported, there was an interval of nearly a month without any known case of plague coming to light. In this interval the general mortality (so far as may be gathered from the statistics published each week) was about the average for this period of the year, and there was nothing to indicate the existence in the city of any unusually fatal disease. But on Oct. 13th a Greek child fell ill in a house in Djerah Moustapha Pasha-street, Galata. This street is in the infected quarter of Galata already described in my former letter, and the house in which the child lived is a short stone's-throw from some of the houses in which the earlier cases occurred. The child presented symptoms of high fever, headache, and delirium; she rapidly fell into the "typhoid" state, and on the 16th she died. After death the body was examined by a municipal medical officer who found a large glandular swelling in the right groin. (This had apparently not been remarked before death.) The house was at once surrounded by a cordon and a further investigation was made by a medical commission which concluded that the case had been one of plague. An examination was then made of the 26 surviving inhabitants of the same house, and it was found that the child's mother had a bubo in the right axilla, that one of the child's sisters (aged nine years) had a bubo in the same position, and that another sister (aged 11 years) had a bubo in the left groin. All three were removed to the municipal plague hospital at Omour-Yéri, on the Bosphorus, and the house and the adjoining house were emptied of their inmates who were sent to the segregation sheds adjoining the hospital. The three patients are now convalescent and no fresh case has occurred among the segregated "contacts."

Another short interval without cases followed, but on Oct. 23rd a man fell ill in Beshiktash, a suburb on the Bosphorus to the immediate north of Pera and Galata. The patient was employed in carrying the dishes prepared in the Government kitchens to the houses of the various officials whose posts entitle them to Government rations. When seen on the 27th he was found to present fairly characteristic symptoms of bubonic plague, with a bubo in the left groin, and though a subsequent bacteriological examination failed to reveal the plague bacillus the case has been dealt with as one of plague. The patient and 11 contacts were removed to Omour-Yéri.

A little later (on Nov. 4th) a patient was admitted to the Greek Hospital in Stamboul, suffering from a disease which, from the clinical symptoms alone, was diagnosed as plague. This patient was employed in a bakery at Sari-Yéri at the northern end of the Bosphorus, on the European side, and some 15 miles from Constantinople proper. He is said to have fallen ill about Oct. 29th, and as he declared that he had not been in the town for six months prior to his illness it is not as yet clear how the infection reached him.

Finally, a fatal case of plague was reported two days ago from the village of Yakadjik, near Kartal, on the Sea of Marmora. Kartal is a station on the Scutari-Ismid line of railway and the village of Yakadjik is some 20 miles from Stamboul. The patient died on Nov. 4th. Full details of the case are at present lacking, but there seems to be some reason for believing that the infection was derived from Galata.

While the above cases indicate clearly that the infection of plague still exists in Constantinople, it is so far satisfactory that the disease remains for the present wholly sporadic and remarkably benign in character. Its benignity is clear from the fact that of the 27 cases recorded since the beginning of the year in or near the city only eight have proved fatal. The mortality-rate is therefore less than 30 per cent. A less satisfactory feature is the wide area from which the patients have been drawn. Several quarters of Stamboul on the south of the Golden Horn have furnished cases, while to the north of the Golden Horn Galata is a true *foyer* of plague, and cases have occurred in Cassim Pasha, Pera, and Beshiktash. At a still greater distance from the city there have been cases at Scutari, at Sari-Yéri on the upper Bosphorus, 15 miles away, and on the Asiatic shores of the Marmora, 20 miles away from the city.

The reappearance of plague in Smyrna has been confined to the occurrence of a single case. The patient, an Italian aged 42 years, was a conductor on the Smyrna-Aidin railway. He was taken ill about Sept. 15th or 16th with symptoms of plague, and plague bacilli were subsequently found in the contents of the bubo.

The outbreak at Samsoun, on the Black Sea coast of Asia Minor, has been rather more extensive, but the disease itself has been of no less benign a character there than that observed in the capital. Of 11 recognised cases only one proved fatal. The outbreak began about the middle of September and the last case was reported on Oct. 4th. It is noteworthy that the majority of the patients were employed in or about a certain grain market, the Bougdhaï Bazar, and that as long as one month before the first human case was recognised a considerable mortality was observed among the rats in this market. It is reported that in the bodies of two rats found dead the plague bacillus was demonstrated. The source of the infection in this outbreak is unknown, but it seems highly probable that it was imported from Constantinople.

In Batoum, on the Caucasian shore of the Black Sea, three suspected cases of plague, with one death, were reported to have occurred about Oct. 27th. Here, also, the source of the infection is unknown and it can only be surmised that it came in some way either from Samsoun or from Constantinople, both infected ports.

Cases of plague on board ship always present points of great interest. Recently the following examples have been reported in the eastern Mediterranean:—

On Sept. 26th the s.s. *Maria Teresa* (Austrian Lloyd) arrived at Alexandria and reported two cases of illness on board. The history of the boat was as follows. On August 14th she arrived at Constantinople from Alexandria; she stayed there till the 29th, when she left for Odessa, returning to Constantinople a second time on Sept. 14th. On the following day she left again for Alexandria. On the 20th, five days out from Constantinople, the boatswain (*nostromo*) was taken ill with fever and an inguinal bubo, and two days later a fireman was also attacked with fever.

[1] THE LANCET, Sept. 21st, 1901, p. 804.

After their arrival at Alexandria the patients were removed to hospital and plague bacilli were demonstrated in the contents of the bubo of the first patient and in the sputa of the second. A third case of plague developed in the person of a sailor on board the ship during her stay at Alexandria. The *Maria Teresa* was disinfected and left for Beirut, whence she was repulsed to Cinzoméne (the Turkish lazaret near Smyrna). Here a fresh case of suspicious disease was landed, but it proved to be other than plague.

It is noteworthy in regard to the above history that plague was present in Constantinople during the first stay of the ship there, and that the date of the second departure of the vessel from the port coincided with the occurrence of a death from plague in the city. It is therefore permissible to surmise that the vessel became contaminated in some way at Constantinople; more particularly as she had called at no other known infected port from the time of her leaving Alexandria, six weeks before the disease appeared on board. A second case of plague on board ship was that of a patient who was landed in Constantinople from the s.s. *Equateur* of the Messageries Maritimes. This ship arrived here on Oct. 17th, and reported all well on board, but the same day one of the crew was taken to the French Hospital with symptoms which proved to be those of plague. He was removed to the municipal plague hospital and is now convalescent. The itinerary of the *Equateur* during her preceding voyage is of some interest in this connexion. She left Marseilles on Sept. 18th, touched at Naples on the 21st, and arrived at Constantinople, the first time, on the 26th. She left on the same day for Beirut; she left Beirut on Oct. 11th, called at Vathy on the 14th, at Smyrna on the 15th, and at the Dardanelles on the 16th, finally arriving at Constantinople on the 17th. The man had probably been ill for several days before the ship arrived at Constantinople the second time, and the question arises whether the ship did not in some way become contaminated when she called at Naples on Sept. 21st—a date when the infection was known to have existed in Naples; or whether she took the infection on board during her first call at Constantinople on Sept. 26th. A third case of plague on board ship was recently reported. A plague patient was landed at Port Said from the s.s. *Portugal* from Alexandria, on Oct. 27th or 28th.

The measures decreed by the Board of Health in relation to the above outbreaks in and near Constantinople have been briefly as follows. The single case at Smyrna was merely annotated on the bills of health, and no quarantine measures were imposed. Against Samsoun a quarantine of 10 days was decreed; and a similar measure was imposed on arrivals from Batoum. In regard to Constantinople ships leaving that port for other Ottoman ports have been subjected to no more than a medical visit on departure and on arrival. The flagrant inconsistency with which a simple medical visit is regarded as sufficient to safeguard other Ottoman ports against infection from Constantinople, while 10 days' quarantine is considered necessary in the case of arrivals from Batoum, Samsoun, and Alexandria, is obvious.

Constantinople, Nov. 7th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague.—Reconstruction Work in Bombay.—The Incineration of Refuse for Indian Cities.—Barmaids in Calcutta.

PLAGUE continues to spread and to develop throughout India. The severely affected districts of the Bombay Presidency—viz., the Satara, Belgaum, and Dharwar districts, with the Southern Mahratta country—return the great majority of the deaths, but the disease is actively spreading in the Punjab where last week there were nearly 400 deaths. Bombay city instead of showing a decline is returning higher figures—nearly 200 deaths having occurred there last week. There are indications of a recrudescence in Calcutta and at Karachi there is a tendency to increase. Poona is showing unmistakeable signs of another outbreak and a fresh outbreak has occurred in the Bangalore cantonment.

Amongst the many improvements contemplated by the Bombay Improvement Trust none is of more importance than the reconstruction of the crowded district known as "1st Nagpada." It has long been the most insanitary area in the city. Intersected by narrow lanes and stinking gullies, but without anything like a road, it was crowded with the roughest and dirtiest dwellings imaginable. According to the last census there was a population of 11,113, which gave a density of 376·1 to the acre, but omitting certain partially open places the population was in reality huddled together on less than 12 acres. Plague has always attacked this quarter with great severity. The Improvement Trust acquired the whole area and plotted out the land afresh. A broad road will run through it with subsidiary thoroughfares branching off. About a fifth of the ground will be free from houses. The trust adopted the excellent plan of reconstruction with demolition, so that the population was not all displaced to crowd the neighbouring quarters of the city. Model *chawls* have been built, and when the scheme is completed it is calculated that the area will house, notwithstanding the new roads, as many as 500 people to the acre. The work is proceeding apace, but those who know India can understand that these improvements cannot be done in a day.

Incineration of refuse is recognised as one of the greatest sanitary improvements of recent years, and the principle has attracted considerable attention in India. There are many more difficulties, however, in India than in Europe. The refuse is largely composed of vegetable matter and contains few or no ashes. It is, in fact, hardly combustible. It has been recently decided to make experiments with incinerators for certain cantonments and Mhow has been selected for a two-furnace Harrington incinerator. There is an incinerator by the same inventor in the suburbs of Calcutta, but it is necessary to have forced draught and a fume-cremator. When these latter appliances are not at work the furnaces cause a nuisance and an incinerator constructed in the crowded part of the city some years ago had to be abandoned. The paying results obtained in some of the English towns are impossible at present in India, and some fresh form of furnace, adapted to the nature of the material, will be necessary to make the burning of refuse successful. Some of the latest forms of furnace have not, I believe, been tried.

Whether in the interest of the health of the young "bloods" of Calcutta or in the interest of the women themselves, it has been decided to prohibit the employment of barmaids. The Board of Revenue will require from the opening of the next excise year "that at the place for which this licence is granted no female shall be employed in connexion with, or take part in, the vending of imported wines and spirituous and fermented liquors in any capacity whatsoever."

Nov. 9th.

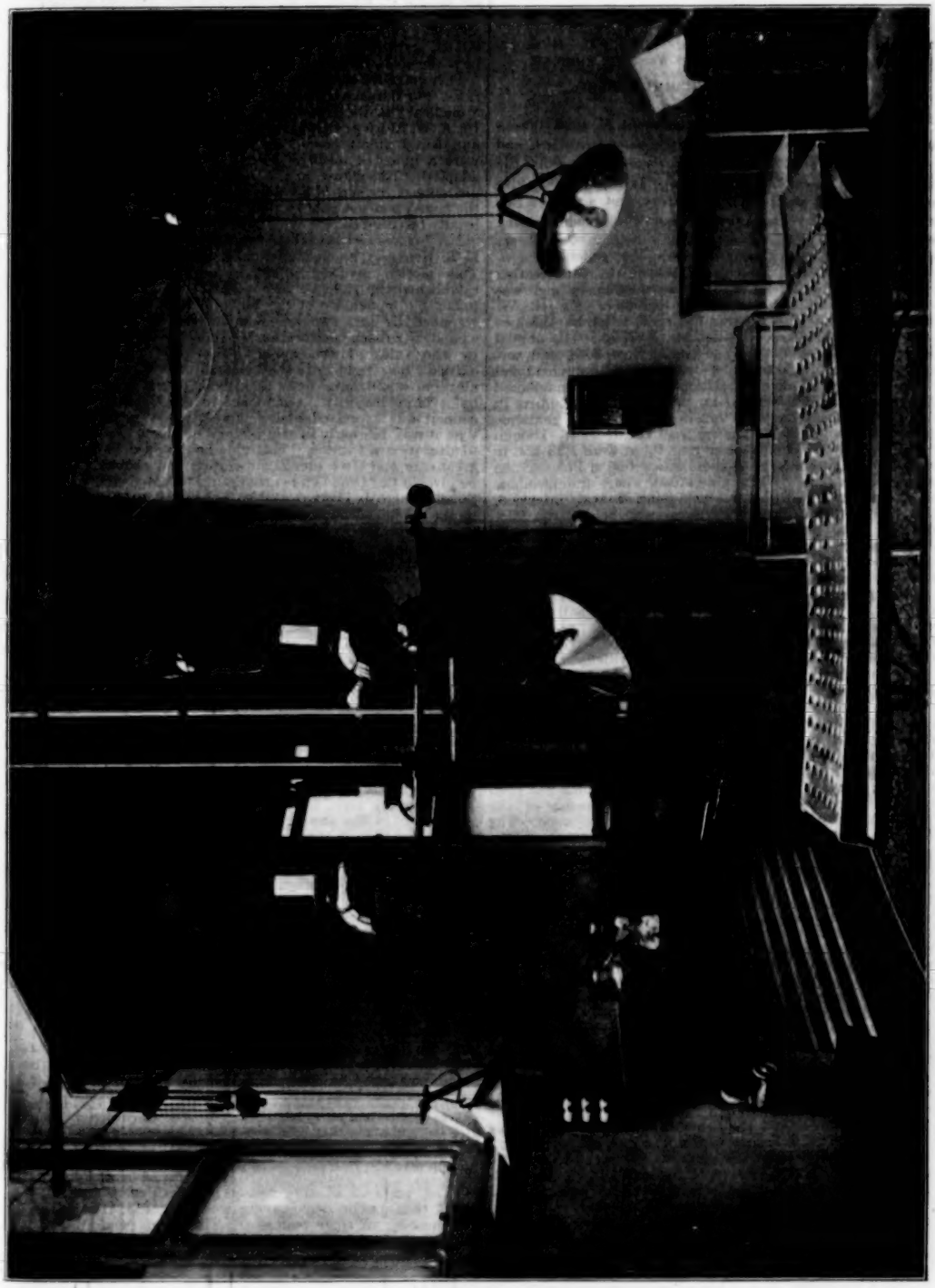
THE LIGHTING OF AN OPERATION THEATRE.

BY PEYTON T. B. BEALE, F.R.C.S. ENG.

THE efficient lighting of an operation theatre by electric light is a matter of such general interest that I venture to bring forward a method which is at once simple, cheap, and satisfactory. The following description is by the maker, Mr. Francis Mulford, of Jackson-road, Holloway.

A steel frame maintained in a position about 10 feet above the floor by cross-wire stays from the skylight carries three trolleys which support three counterweighted tilting and swivelling shades (*vide* illustration). The trolleys have a lateral motion of about three feet. The shades are of solid aluminium, tilting through 180°, swivelling through a complete circle and rising and falling about three feet. Three 16-candle-power lamps are arranged in each, either one, two, or three being brought into use by means of two switches, one of which controls one lamp and the other two lamps. There are therefore six switches in all—two to each pendant. There are wall plugs for hand lamps, cautery, &c.

This arrangement was installed at the operation theatre of the Great Northern Central Hospital over a year ago and has been found to work excellently. The special points in its favour are: (1) the pendants and wires when not in use hang well above, and entirely on one side, of the operation table, so that any dust which may settle upon them does not fall upon the wound during an operation; (2) any amount of light can be obtained at will, at any level, at any angle, and on either side of the patient; (3) the light is absolutely steady; and (4) the arrangement is inexpensive.



The Lighting of an Operation Theatre.

THE ORGANISATION OF THE PROFESSION.

THE BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS UNION, SECOND ANNUAL MEETING.

(FROM OUR SPECIAL COMMISSIONER.)

THE Birmingham and District General Medical Practitioners Union has now been in existence for two years, and on Nov. 21st it held its second annual meeting at the Birmingham Medical Institute. I hope subsequently to give some account of the formation, history, and action of this organisation; but I would first describe the annual meeting which has just taken place. It was held in the library of the Medical Institute and some 50 general practitioners were present, which, in view of the bad weather and the consequent increase of sickness prevailing, was considered to be a fairly good attendance. Mr. H. W. Langley Browne was in the chair, assisted by the two secretaries, Dr. E. D. Kirby and Mr. J. Neal. The annual report of the council, for the year ending Sept. 30th, 1901, was discussed. According to this document the Birmingham and District General Medical Practitioners Union now numbered 253 members, which showed an increase of 64 members in 12 months. There had been one death and 12 resignations, due for the most part to removal from the district. Though the subscription was only 5s. a year there were £32 12s. in hand. In an adjoining room there was a map of Birmingham studded with pins. White pins stood where the members of the union resided and black pins, I was informed, represented the residences of those who refused to join. It was gratifying to note that the white pins were in an overwhelming majority. Then we were informed that the medical practitioners of Walsall had joined *en bloc*, so that their local organisation had become one of the medical wards of the Birmingham and District Union. It is proposed that this union shall confine its action within the same boundary lines as the Midland Counties Branch of the British Medical Association, though these frontiers have not yet been accurately defined.

The annual report then described the success achieved in regard to the attempt made by the Hospital Saturday Fund, "at the instigation of Mr. Arthur Chamberlain and other capitalists," to impose on the public consultants of their own choosing. Not only was Dr. H. W. Irvine compelled to resign but such was the unanimity of the profession that intending candidates withdrew their applications. The affairs of the Coventry General Dispensary—an institution which has been repeatedly condemned by the Birmingham Branch of the British Medical Association—were next touched upon. The medical officers of this dispensary attend a third of the population of Coventry and yet receive barely 2s. per head per annum. The policy adopted was to refuse professional recognition of the medical officers of this dispensary, but certain consultants in Birmingham had disregarded this resolution and thus retarded the desired reforms. The report further explained that various objectionable forms of advertising had been checked and that a journal describing the work of the union would be issued. Then an increased rate of discount for drugs had been obtained by the action of the union and also reduced terms for insurances of various kinds. Finally a register for locum-tenents had been established. Altogether some useful and practical work had been achieved, but it was necessary to collect more statistics before the question of contract or club work could be taken in hand. For this purpose printed forms were distributed which, when filled up, would show the rate of payment received in proportion to the work done.

After this report and the minutes of the previous meeting had been adopted a discussion arose as to what action could be taken with regard to the consultants who still consented to meet the medical officers of the Coventry Dispensary. By the timidity and the doubts manifested in regard to this matter it was easy to perceive that the members were as yet new and inexperienced in the work of a militant organisation of this description. First it was proposed that the names should be published, but then fear was expressed that a black-list might lead to a prosecution for libel. As a safer course it was urged that a white-list might be issued. No one, however, knew all the names of the consultants who might thus be proclaimed as having stood by the union, and it would be a great injustice to omit any name. At last, on the motion of Mr. N. L. U. Somers, it was decided to apply to the secretary of the Medical Union at Coventry for the names. Thus in the course of time a white-list will be issued, and this is the next most effective measure that can be taken short of publishing a black-list.

There now followed a long array of proposed alterations of rules. For the sake of brevity it was proposed to drop the word "medical" in the title of the union, but it was objected by Dr. A. W. Aldridge that as they did not intend to include legal and dental practitioners they must specify clearly that they were a union of medical practitioners, and this view was adopted. The clause in the rules by which each member guaranteed the sum of £1 was struck out on the ground that the money was not now wanted and that the rule could not legally be enforced.

Mr. Somers now brought forward a motion proposed by Mr. E. R. Hennessy, as that gentleman was unavoidably absent. This motion involved a rather important principle. It established the right of any qualified medical practitioner to become a member of the union if he was proposed and seconded by any two members of the union and if he signed a written declaration of his willingness to abide by the rules of the union. Had this proposal been carried the right of the council to veto any such election would have been abolished, but it was defeated by a large majority. Confidence in the discretion of the council was expressed, and a protest was very justly made that it was too early in the history of the union to begin to alter its constitution. The rules had been drawn up with great care and after much deliberation and they had better be given a fair trial before attempting to patch and to alter them. There is every reason to believe that the confidence in the council which has thus been expressed by words and by vote is in every sense thoroughly justified and well-founded. But, putting this particular council and union altogether aside, and dealing with the matter purely as an abstract question, there is something to be said in favour of Mr. Hennessy's proposal. It is a point on which I have often had occasion to insist. A militant organisation of this description must act in an inverse sense to the aim governing the management of most other societies. The object in this case is not to bring the most reputable and respectable men together, but rather the reverse. It is the practitioner of the class known as the "sixpenny doctor," who is the most to be feared. It is a case of rejoicing more over the one lost sheep than over the ninety-and-nine. It is precisely these doubtful persons who must be brought into line. It would never do to allow social considerations or personal feelings to rule such men out of the union. The union should not be a select society club, but a fighting body governed by considerations of the strategy necessary to achieve the end in view; therefore it must use its best endeavours to recruit that class of men who by reason of their less favourable position are most easily induced to undersell or to undercut their fellow practitioners. But it is just conceivable that a council if left to itself might allow its dislike of an individual to override what should obviously be the policy of the union. Again I repeat that these observations are not in any way meant to apply to the council of the Birmingham and District General Medical Practitioners Union, but are purely abstract considerations. The argument which prevailed at Birmingham was that it was preferable for the council to veto a candidate than that the union should have to expel him shortly after the election.

A lengthy discussion now ensued which, though interesting in itself, had not any very urgent or direct bearing on the main purpose of the union. Mr. Somers moved:—

> That this meeting desires to express its disapproval of that portion of the Vaccination Act which authorises public vaccinators to call at the home of a child to be vaccinated without a special request from the person having custody of the child.
>
> That it is degrading an honourable profession to require any of its members to offer their professional services unsolicited.

The proposer of this motion was evidently grieved to find that public vaccinators were far too amiable and insinuating in their manners. They had been known, it appeared, to bestow new pennies on recalcitrant children. As for the distribution of sweets, this was a well-established method of bribery and corruption. But, even worse than any such amiable weakness, there were instances where the public vaccinator had actually given gratuitous medical advice. As an excuse for refusing vaccination the mother might say

that her child was not well. Thereupon the public vaccinator would insist on seeing and examining the child. Then, if the child was really unwell, he would give advice and prescribe remedies, concluding by announcing that he would call again. On his return the child might be well, and the mother, in gratitude for the good advice received, would allow the child to be vaccinated. Thus the private practitioner lost both his fee for medical attendance and his fee for vaccinating the child. This was State competition against the private practitioner. It augmented the burdens of the ratepayer and was doubly hard on the private practitioner, for he lost his patient and found his rates increased. Mr. Somers, however, recognised that the public vaccinators held a very responsible position and he said that he would like to see them better paid, but at the same time they should not be put in a position to interfere with private practice. Mr. H. W. Pooler delivered a very able speech in reply, backing each argument with numerous statistics. He thought that the object of their union was to elevate the profession. Therefore it was more necessary to urge private practitioners to vaccinate more efficiently than to attack the public vaccinators who were consistently doing their duty. It was also the object of their union to try to obtain better fees; why then should they strive to hit at the public vaccinators who, comparatively speaking, were fairly well paid? It was necessary to inquire why domiciliary visits had been instituted before condemning them on the slender grounds that sweets were given to the children. The first point to ascertain was whether domiciliary visits had secured a more efficient vaccination of the population. Statistics showed that during the five years previously to 1877 there was an annual average of 4·7 per cent. of children unaccounted for. During the next five years the annual average rose to 5·8 per cent., and went on increasing till for the five years preceding the year 1897 the annual average of children who were not vaccinated amounted to 20·3 per cent. For 1898 the proportion was 21 per cent. It was then that the Act was passed authorising domiciliary visits, and before this law could be modified it was necessary to prove that it had failed to produce the desired effect. The interests of the population at large must take precedence over the desire to protect the interests of any one particular class of medical men. The result of domiciliary visits was that in the first year 164,000 more vaccinations had been effected. But had this injured the private practitioners? In the Birmingham district of Aston, during the year previously to the Act, private practitioners had vaccinated 4620 children and the public vaccinator 2064 children. After the Act was passed the average annual increase of vaccinations effected by the public vaccinator amounted to 928; but this had not in any way injured private practitioners. The number of private patients whom they vaccinated had not decreased; it had remained stationary, or, rather, it had increased to the number of 24. Thus, and without injuring private practitioners, the number of vaccinations effected in the single district of Aston had been augmented to close upon 1000 per annum. Such solid advantages were not to be lightly set aside.

In the course of the discussion that followed this speech protests were made that there was no desire to act against efficient vaccination, but only to prevent interference with private practice. On the other hand, it was urged that the private practitioner was the undisputed master of the situation during four months. It was for him to see that the children were vaccinated during that time and before the public vaccinator had the right to pay domiciliary visits. Ultimately the motion was rejected by a large majority.

The President (Mr. H W. Langley Browne) then called upon me to deliver an address and I had the pleasure of explaining the methods of organisation adopted by medical men in different countries on the continent, comparing what was done abroad with the movement in England. It is not for me, however, to describe my own speech, and I will content myself with expressing my gratitude for the hearty reception which I received.

Dr. Kirby followed, pointing out the great service which THE LANCET had rendered by the articles that it had published on the economic position of the medical profession in the Birmingham district. They had helped to awaken medical men to a sense of the dangers by which they were menaced and had rendered the work of organisation more easy. After this the officers of the union were elected for the year and the annual meeting was brought to a conclusion.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Work of the Malarial Expedition of the Liverpool School of Tropical Medicine.

THE Governor of Sierra Leone (Sir Charles King-Harman) has stated in a letter recently received by Major Ronald Ross, F.R.S., that out of 400 public servants only three were on the sick-list at the end of October, and these were not suffering from malarial disease. The nursing home was empty. His Excellency added that he had inspected the work which was being done by the Liverpool expedition under Dr. Logan Taylor, in draining and cleansing the town, and he had been surprised at the improvement which Dr. Taylor had effected. The inhabitants were much interested in the mosquito question, and they had the intelligence to appreciate the good that was being done for them by the united efforts of the Liverpool School and of the Government of Sierra Leone. The figures quoted suggest that the sick-rate in Sierra Leone has fallen below 1 per cent. This, if it lasts, will be wonderful. Even in India the sick-rate among European troops is about 10 per cent., and among the native troops about 3 per cent.

The School of Tropical Medicine and Sir Alfred L. Jones, K.C.M.G.

The following resolution of congratulation to the chairman of the above school, Sir Alfred L. Jones, K.C.M.G., was adopted at a special meeting of the committee:—

That the Liverpool School of Medicine desires to express to its chairman, Sir Alfred Jones, K.C.M.G., warmest congratulations on the honour paid to him by His Majesty the King. The committee of the school wish to take this opportunity of expressing their own high appreciation of the value of their colleague's (Sir Alfred's) services to humanity by his foundation of this school and by his willing sacrifice of time, money, and energy in the furtherance of its objects.

The Hospital Saturday Fund.

The annual meeting of the subscribers to the Hospital Saturday Fund was held on Nov. 18th, the Lord Mayor being in the chair. The annual report testified to the continued success of the fund, stating that the amount raised was steadily increasing. Firms were gradually being induced to adopt the weekly system of collection, the most efficient and beneficial to the fund, and also the easiest one for the subscribers. The amount realised from the workshop collections this year was £6645 15*s.* 2*d.*, an increase on that of 1900 of £371 5*s.* 10*d.*, or nearly 6 per cent. Unfortunately, the ladies' street collection was somewhat lower—viz., £767 7*s.* 3*d.*, against £829 7*s.* 6*d.* in the previous year, making a total of £7413 2*s.* 5*d.*, being a net gain for the year of £309 5*s.* 7*d.* That amount, together with the Hospital Sunday collection, which showed a substantial increase, had been divided amongst the medical charities of the city, the total amount so distributed being £13 365 10*s.* The expenses were heavier than usual, the committee having found it necessary to employ more assistance efficiently to carry out the organisation, and also to provide a large number of additional boxes to meet the growing demand.

Presentation to a Police Surgeon.

The members of the F Division of the police force have presented one of their late medical officers, Dr. T. Gerald Garry, on his departure for Florence with an illuminated address as a token of the esteem and respect in which he was held by the division. Dr. Garry was connected with the police force for over six years.

Nov. 28th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Colour-blindness among Swansea Schoolboys.

ONE of the medical officers of the Swansea School Board (Dr. Rhys Davies) has recently been subjecting some of the boys attending the schools to the Holmgren wool test and has also been testing their acuteness of vision and hearing. Altogether 1500 boys were examined, 50 being taken from each school, and 81, or 5·4 per cent., were found to be

colour-blind. Roughly speaking, in every class of 50 boys, although each boy was not examined, two or three were colour-blind, five or six lacked acuteness of vision, and seven or eight were more or less deaf. If the class teachers are made aware of the significance of these results a great deal of good will accrue from the examinations, which should be extended to the remaining pupils at all the schools in the town.

Prevention of Consumption.

The Bath Town Council decided on Nov. 18th to contribute £250 yearly for two years towards the cost of building the sanatorium which it is proposed to erect at Winsley for the counties of Somersetshire, Wiltshire, and Gloucestershire.—A well-attended meeting was held at Bedminster Town Hall on Nov. 18th, under the presidency of Canon Griffiths, in support of the proposal to erect a sanatorium at Winsley for consumptive patients of Gloucestershire, Somerset, and Wilts. Addresses were delivered by Dr. P. Watson Williams, Dr. J. Michell Clarke, Dr. D. S. Davies, and Dr. Lionel Weatherly. The last-named, who is chairman of the Executive Committee, stated that about £6000 had been promised towards the £20,000 required for the sanatorium and that the committee must have another £8000 before they could lay the foundation-stone of the building.—A circular letter has been issued by the Yeovil Board of Guardians to the boards of guardians in Somersetshire suggesting that a joint hospital should be erected or acquired for the treatment of pauper consumptive patients from any part of the county.—The newly-formed branch for South Wales and Monmouthshire of the National Association for the Prevention of Consumption and other Forms of Tuberculosis is carrying on its work with vigour. A meeting of the Executive Committee was held on Nov. 22nd, when the report of a sub-committee was adopted, recommending voluntary notification of cases of phthisis. It was suggested by Dr. J. Howard-Jones, medical officer of health of Newport, that steps should be taken to induce Parliament to adopt preventive measures in Government works.—The town clerk of Cardiff has drawn up a circular which is to be sent to county and district councils pointing out the powers possessed by sanitary authorities with regard to the provision of hospitals for the treatment of persons suffering from consumption.—A very large edition of Dr. Isambard Owen's address to the inaugural meeting of the Cardiff branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis has been printed and is to be spread broadcast throughout South Wales and Monmouthshire.

Appointment of a Colliery Surgeon in the Rhondda Valley.

The colliers employed at the National Colliery, Wattstown, in the Rhondda Valley, have elected Mr. T. J. Davies as their surgeon at a fixed salary of £416 per annum. This sum does not include the provision of a surgery, drugs, &c. There were 37 applicants for the post, of whom nine were balloted for, Mr. Davies receiving 653 votes, while for the next name on the list only 121 votes were recorded. Mr. Davies has been acting surgeon for the colliery for the past three years as assistant to the late Mr. Ivor Lewis.

The Local Government Board and Isolation Hospitals.

In a circular issued by the Local Government Board to district councils it is laid down that a local authority should not contemplate the erection of a small-pox hospital on any site where there would be within a quarter of a mile a hospital, a workhouse, or some similar institution, or a population of from 150 to 200 persons, or where within half a mile of the site the population would exceed from 500 to 600 persons. If these conditions are not complied with the sanction of the Board to a loan for the erection of an isolation hospital is withheld, unless the sanitary authority gives an undertaking that the hospital will never be used for small-pox patients. In several districts, however, this position of the Board is defeating the end which it has in view. At Thornbury, in Gloucestershire, where there is a population of nearly 17,000 persons, the rural district council recently decided to build a substantial permanent hospital, and desired, should occasion arise, to use it for small-pox; but as sanction to a loan under these circumstances is not forthcoming a less substantial building will probably be erected for which payment will be made out of the current rate. Many contractors, moreover, are willing to allow payment for the construction of iron or wooden buildings to be spread over three or five years, so that the way of sanitary authorities is smoothed and they are enabled to ignore the Local Government Board.

Wiltshire County Asylum.

At the meeting of the Wiltshire County Council held on Nov. 20th it was decided to erect an iron isolation hospital for the county asylum at an estimated cost of £1750, and also to build new visiting and attendants' rooms at an expenditure of about £2000.

Nov. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

As previously announced, the finance committee of the town council recently resolved to recommend the corporation to subscribe a sum of £5000 to the fund now being raised for the better equipment of Glasgow University. This recommendation was submitted to the town council at a meeting on Nov. 21st and led to a somewhat heated discussion. Several of the councillors energetically opposed the proposal and indulged in free and not very relevant criticism of the attitude of some of the University professors to so-called social questions. In support of the proposition the precedent provided by a gift of £10,000 at the time the new University buildings were erected was pleaded and it was pointed out that other cities were offering financial support to their several universities. The Lord Provost, too, threw the weight of his influence in favour of the committee's recommendation. He commented on the excellent relations existing between the city and the University and on the interests common to both of them. Referring to the suggestion to utilise the proposed gift for the foundation of a lectureship on social philosophy, he urged that the modern problems presented by the city were questions of the first importance and that it concerned the welfare of all classes to have them presented to the attention of the rising generation. These arguments, however, proved in vain, and the council by a majority of 32 to 28 remitted the proposal to the committee for further consideration.—The following have been elected representatives of the medical side of the quadrangle on the Students' Representative Council: D. R. Hunter, M.A., David M'Leish, M.A., D. F. Riddell, M.A., Miss Gertrude Bostock, B.Sc., and Miss Oversby.

The Suppression of Tuberculosis.

A public meeting, under the auspices of the local branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, was held in Glasgow on the evening of Nov. 19th. The Duke of Argyll presided and was supported, among others, by the Lord Provost, Sir James Crichton Browne, F.R.S., Dr. James Finlayson, Professor McCall Anderson, and Professor William Macewen. After some introductory remarks by the chairman Sir J. Crichton Browne made an eloquent speech on behalf of the National Association. Allowing that the mortality from consumption had been considerably reduced during the last 30 years he quoted figures to show that the death-rate of the disease in Glasgow was still 20 per 10,000. He considered that without some additional effort the mortality was not likely to be much further reduced. He therefore claimed support for the endeavour to educate public opinion in the methods necessary for the prevention and treatment of the disease. In particular, he advocated the dissemination of information regarding the evils of indiscriminate spitting, the necessity for disinfection, and the value of sanatoriums, which, he said, ought to be provided by local public authorities. Professor McCall Anderson, who also spoke, paid a warm tribute to Mr. William Quarrier under whose influence a sanatorium for the treatment of the consumptive poor of the West of Scotland has been established at Bridge of Weir. In this institution, Professor Anderson said, 65 per cent. of 95 patients had been practically cured even though many of them had been admitted in a comparatively advanced stage of the disease. The Lord Provost, in proposing a vote of thanks to the Duke of Argyll, remarked that the corporation were determined to do all that was possible in the direction of preventing the spread of consumption, whether they saw their way to take steps towards the cure of it or not. At

a recent meeting of the town council a proposal was submitted recommending a donation of £250 to the local branch of the National Association. This was met by an amendment that the sum should be increased to £500 and on a vote the amendment was carried. In the course of the discussion Dr. Carswell argued that a much larger responsibility than the gift of a few hundred pounds lay on the corporation. The establishment of sanatoriums was, he urged, merely touching the fringe of the question. What was really needed was the introduction of fresh air and sunlight into the congested areas of the city. It was for the corporation to undertake this and in doing so they must be prepared to spend many thousands of pounds.

The Plague in Glasgow.

Dr. A. K. Chalmers reports that the city is now entirely free from plague. Of the five patients attacked one has died, whilst the other four have completely recovered. The Central Hotel, where the outbreak originated, has been re-opened, and with a view to establish public confidence the Lord Provost on the opening day dined and slept in the hotel.

Glasgow Technical College.

Some two months ago Mr. Carnegie promised to subscribe £25,000 to the building fund of the Glasgow Technical College on condition that an equal sum was "promptly" raised from other sources. This condition has been realised in abundant measure. At the last meeting of the council the chairman was able to announce that he had received two anonymous donations for £25,000 and £10,000 and other sums, making a total of £44,000. The fund, including Mr Carnegie's subscription, now amounts to nearly £170,000. A large share of credit for this highly satisfactory position is due to the energy and tact of the chairman, Mr. W. R. Copland.

Death from Electricity.

A fatal accident of an unusual nature occurred a few days ago at the Glasgow Corporation Electric Power Station. A labourer who was working on the roof lost his balance and fell. In his descent he grasped a metal bar which was charged with electricity. As a result his hands were practically destroyed and he was also severely burned on the scalp. He died a few hours after admission to the hospital.

Gifts to Glasgow Institutions.

By the will of the late Mr. William Langlands a sum of upwards of £10,000 falls to be distributed among medical and other charities in Glasgow. Of this the Royal Infirmary and the Western Infirmary receive each £1000; the Cancer Hospital, the Training Home for Nurses, and the Nursing Association, each £500; and smaller sums are devoted to various special institutions and hospitals.

Nov. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Catholic University School of Medicine.

AT the Medical School of the Catholic University in Cecilia-street, Dublin, the Dean of the Medical Faculty, Sir Christopher Nixon, distributed the prizes awarded at the various school examinations held during the year. The meeting, which was largely attended, took place on Nov. 23rd.

Dublin Hospital for Diseases of the Skin.

The annual meeting of the friends and supporters of the Dublin Hospital for Diseases of the Skin was held on Nov. 7th at the Mansion House, the Lord Mayor occupying the chair. Mr. O'Neill, the honorary physician, dwelt on the necessity of procuring the installation of a lupus lamp in order to apply to that disease the treatment discovered by Professor Finsen of Copenhagen. A fund has been started with that object and many subscriptions have been received.

Sir Philip Smyly's Son.

It is announced in the *London Gazette* that the King has been pleased to give directions for the appointment of Mr. Philip Crampton Smyly, Attorney-General of Sierra Leone, to be Chief Justice of that colony. It will surprise many of the friends of Sir Philip Smyly, the eminent surgeon of Dublin, to know that he can possibly have a son sufficiently old to be a Chief Justice. Such, however, is the fact.

The Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in Princes' Restaurant, Belfast, on Nov. 21st. The President (Professor W. Whitla) occupied the chair and the invited guests included the Lord Mayor of Belfast (Sir D. Dixon, D.L.), the President of the North of Ireland Branch of the British Medical Association (Dr. J. S. Darling of Lurgan), the President of the Royal College of Surgeons in Ireland (Mr. T. Myles), the President of Queen's College, Belfast, Lieutenant-Colonel R. G. Thomsett, R.A.M.C., Dr. P. Redfern, and Mr. T. MacLaughlin (Londonderry). After dinner the chairman proposed the first two toasts, "The King," and "The Queen, Prince and Princess of Wales, and other Members of the Royal Family." The next toast was also proposed by the chairman, "The Lord Lieutenant and prosperity to Ireland," to which Mr T. Myles of Dublin replied. "The City and Trade of Belfast" was proposed by Dr. J. W. Browne and responded to by the Lord Mayor of Belfast. The President of Queen's College, Belfast, proposed the toast of "The President of the Ulster Medical Society," to which Professor Whitla replied, and announced that he was prepared to offer to the society the gift of a building for a medical institute where meetings of the society could be held and a medical library established, on condition that the members could see their way to provide an adequate annual income for its maintenance. This generous offer was received with much enthusiasm, and it is satisfactory to note that substantial guarantees to provide the necessary upkeep have been obtained. Excellent songs and recitations were given at the dinner by Mr. Imrie, Mr. Livingstone, and Dr. J. S. Morrow.

The Royal Victoria Hospital, Belfast.

The board of management of the Royal Victoria Hospital, Belfast, on Nov. 23rd appointed Lieutenant-Colonel A. Deane, I.M.S. (retired), resident medical superintendent of the hospital. Originally there were 29 candidates from all parts of the United Kingdom, and a large sub-committee of lay and medical members of the board of management was appointed to examine into the qualifications of these applicants. This sub-committee, composed of commercial and professional gentlemen, had three prolonged sittings and considered in the most careful way the testimonials, experience, &c., of each candidate, and finally decided unanimously to recommend Lieutenant-Colonel Deane. On this sub-committee there were also representatives of the ladies on the board of management.

Heroic Death of an Irish Dispensary Medical Officer.

It is with the deepest regret that I announce the death, under peculiarly sad circumstances, of Mr. W. Smyth, L.R.C.S. Irel., dispensary medical officer of Dungloe No. 2 district, co. Donegal, which took place at his residence, Rohine Lodge, Burton Port, Donegal, on Nov. 22nd. It would appear that some weeks ago an outbreak of typhus fever occurred on Arranmore Island, which is distant about three or four miles from Burton Port, on the western seaboard of Donegal. Mr. Smyth, in whose district this island is situated, was most anxious to have the patients removed to the isolation hospital at Glenties, on the mainland, but in this he was met with such difficulties and opposition that Dr. McCarthy, Local Government Board Inspector, was sent to his assistance. The fishermen would neither lend their boats nor would they row the fever patients across. An old and unseaworthy boat was, however, purchased by the relieving officer, and the two medical men, who were novices at rowing, set off in her for the island. On their arrival new difficulties arose, as the friends of the patients opposed their removal, and it was only with the help of a police escort that the medical gentlemen could at last make their way to the houses where the typhus-fever-stricken patients lay. Under police protection they entered the houses and removed the patients to the boat and began their homeward journey. While on the way they hailed a boat which was manned by six policemen and requested to be taken in tow to Burton Port, but these protectors of their country would neither come near the boat containing the patients nor render any assistance. Mr. Smyth and Dr. McCarthy at length, tired out with their unaccustomed exertions, reached Burton Port, where an ambulance awaited their arrival, and the patients were removed to Glenties Fever Hospital, where they are progressing favourably, but Mr. Smyth caught the infection of typhus fever and succumbed in a few days, a victim to that fell scourge which has proved fatal to so many medical men at various

times in Ireland. The great heroism of the medical man in carrying out his duty in the teeth of such difficulties and in the face of such selfish, ignorant, and superstitious opposition is worthy of the highest commendation. The Victoria Cross has been given for many a less heroic act. The saddest part of this tragedy is that he leaves a widow and eight children. It is noteworthy that his predecessor met his death under exactly similar circumstances. It is to be hoped that the authorities will inquire into the alleged utter selfishness and inhuman conduct of the police and the fishermen and that they will make some suitable provision for Mr. Smyth's widow and children.

Nov. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Competition for the Nomination of Dental Surgeons to the Hospitals.

THE Assistance Publique, in furtherance of an ideal which it has set up for some time past, has just given notice that dental surgeons to the hospitals will be appointed after competition. Candidates will have to submit proofs that they have possessed the degree of Doctor of Medicine for three years and that they have attended during two years at the practice of a dental hospital. For former *internes* of the Paris hospitals these two periods of three and of two years are reduced to one year each, while the two-year period of attendance is, for this competition only, reduced to one year in the case of candidates other than former *internes*. The competition will include two kinds of tests—namely, "*épreuves d'admissibilité*" and "*épreuves definitives*." In the first class there has to be submitted a written paper on some pathological subject, for which two hours will be allotted. There is also a practical test in the examination of a patient who is suffering from some ordinary medical or surgical affection and another in the examination of a patient who is suffering from a dental affection. For each of these examinations the candidate will be allowed 20 minutes to go over the case and to form his diagnosis, while he will be allowed 15 minutes to lay his opinion before the jury. In the second class—the *épreuves definitives*—are included the following:—1. A *viva-voce* examination in dental pathology or therapeutics. The candidate will be allowed 10 minutes to think over his answer and the same time in which to deliver it. 2. A *viva-voce* examination on the theory of artificial dentures. Candidates will be supplied with a model of a mouth on which to demonstrate their ideas as to the construction and application of the denture. Candidates will have 10 minutes in which to think over what they are going to say and 10 minutes in which to say it. 3. A written report upon a patient suffering from some dental affection. 15 minutes are allowed for this and the report must be read out as soon as it is finished. The jury will consist of five members—namely, one surgeon and one physician to the hospitals and three hospital dentists. But as a temporary arrangement which will hold good for the first two competitions only the jury will consist of two surgeons and one physician to the hospitals and two hospital dentists. Hospital dentists are compulsorily retired at the age of 65 years.

Cases of Whooping-cough in Trains.

Dr. Variot is carrying on an active campaign to make it generally understood that children suffering from whooping-cough should be isolated when travelling by train. Change of air is the chief method of treatment of this disease and Dr. Variot wishes to make it obligatory upon the railway companies to provide special compartments for children with whooping-cough who have been certified as such by a medical man. Any ordinary carriage would do, provided that it were labeled "Reserved." All blinds or curtains should be removed and the upholstery work should be covered with some material which is smooth and impermeable, so that it could be easily sterilised. After the children have left the carriage all the cushions should be taken out and disinfected, while the windows should be washed down with a solution of perchloride of mercury. Following out some suggestions of M. Albert Robin (president of the association of medical men practising at various health resorts), in conjunction with the Minister of Public Works, the railway companies are shortly going to introduce important improvements in the hygiene of railways. It is much to be wished that Dr. Variot's suggestions may be acted upon.

The Spittoons at the Gare du Nord.

As is well known the Gare du Nord is provided with spittoons. M. Périer has just made an investigation into the utility of these appliances and here are the results. The spittoons stand at a height of one metre above the ground. On Oct. 18th 625 persons passed the spittoons on platform No. 6, of whom three spat on the ground and two in the spittoons. Between 5 P.M. and 5.30 P.M. 315 persons passed the spittoons on platform No. 12, of whom eight spat on the ground and only one in the spittoon. On Oct. 19th out of 450 persons who passed the spittoons on platform No. 6 12 spat on the ground and only one in the spittoons. From half-past eight to nine o'clock 410 persons passed the spittoons on platform No. 15, of whom seven spat on the ground and one in the spittoons. On Oct. 20th 630 persons passed the spittoons on platform No. 6, nine of whom spat on the ground and not one in the spittoons. From 11.15 to 11.45 580 persons passed the spittoons on platform No. 12, of whom four spat on the ground and only one in the spittoons.

Hospital Abuse.

M. Mourier, the chairman of the General Board of the Assistance Publique, has just appointed a committee of ways and means to study the question of how best to exclude from the hospitals those who are really neither poor nor necessitous. In this connexion the Seine Medical Practitioners Association has requested its members to address as soon as possible any relevant communication which they may wish to make to Dr. Rotillon who is a member of the committee in question.

A Method of Writing for the Blind.

M. Dussaud laid before the Academy of Medicine at their meeting held on Nov. 19th a method for enabling blind people to write in the same manner as they read, a result which has been vainly sought for during 70 years. The Braille alphabet, as everybody knows, is made out of 82 signs obtained by the varying combinations of six dots. These are stamped in relief on the paper and the blind person reads them by passing his fingers over the surface. To reproduce these signs so that they can be read in their turn the blind person drives a stylus into the paper and so makes a depression—that is to say, he writes his signs on the back of the sheet so that they come out in relief on the front. Therefore, he has to write these signs the reverse way, as engravers do. In this way it will be seen that writing for the blind under present conditions offers many difficulties, for he has to learn his alphabet twice over—once to read it and in a reverse manner to write it. He only has the combination of six dots to work with, and therefore he has to write an "e," for example, so as to read an "i," and so on. This is a maddening process. M. Dussaud employs a metal regulator divided into compartments carefully aligned. At the bottom of each compartment there are six holes and this regulator is placed on the paper. Underneath the paper another regulator is placed corresponding to the top one, but having six points which stick up into the six holes of the one on the top. The blind person drives his stylus into the necessary holes to form a letter, but in place of making a hole he forces together the two regulators, and so the letter is produced in relief by the points of the regulator underneath driving the paper up through the holes of the one on the top. He therefore can write directly characters which can be read. The same method is applicable to writing figures or music, and it has brought about a real revolution in the lot of the unfortunate beings who are deprived of the sense of sight.

Nov. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Berlin Medical Society.

THE first meeting of the Berlin Medical Society after the summer recess took place on Oct. 30th. The honorary president, Professor Virchow, who was present for the first time since the celebration of his eightieth birthday, was again the object of general and hearty congratulations. The presidential chair was decorated with flowers and when Professor Virchow arrived he was received with applause and

addressed by Professor von Bergmann on behalf of the society. Professor von Bergmann described his work in connexion with the society of which Professor Virchow was one of the founders and since 1882 has been president and lately honorary president. The society, which is at present accommodated in Langenbeck House, belonging to the German Surgical Association, intends to build premises of its own, to be called Virchow House, for which considerable funds have already been collected. Professor Virchow, in his reply, said that he was proud of so many marks of sympathy and glad to see how strongly the corporate feeling of the medical profession showed itself on this occasion.—Professor Senator then read a paper on Banti's Disease. In 1894 Banti described an affection which is characterised by anæmia, enlargement of the spleen, and cirrhosis of the liver with ascites. The duration of the disease was about six years, and it was caused by infection originating in the intestinal canal. Bacteriological examination of the blood gave no result, but the red corpuscles and the leucocytes were found to be decreased. Frequent hæmorrhages from the nose, the stomach, and the intestines were a very characteristic symptom. The diagnosis was not easy; for the disease might be mistaken either for leukæmia or for cirrhosis of the liver. Banti recommended the removal of the spleen by operation. Of 11 cases treated in this way nine recovered and two died from hæmorrhage. Professor Senator said that the prognosis was not so bad, and recommended a nourishing diet combined with the administration of ferruginous compounds and arsenic. He then showed a patient who for the last seven years had suffered from overgrowth of the spleen, and who a few months ago developed considerable ascites. 24 litres of fluid were withdrawn by puncture of the abdominal cavity, the result being that the ascites had now completely disappeared. The liver was apparently normal, there was slight albuminuria, and the red corpuscles of the blood, the hæmoglobin, and the leucocytes were decreased.

Quinine in Surgery.

Dr. Marx, writing to the *Centralblatt für Chirurgie*, calls attention to quinine as a styptic and antiseptic agent. According to his experiments hydrochlorate of quinine has the power of causing agglutination of the red corpuscles of the blood, and in surgical practice compresses wetted with a solution of it may be applied to wounds; it is specially to be recommended for parenchymatous hæmorrhages. Quinine has, of course, only a limited disinfecting power, but in aseptic operations it will serve to stop parenchymatous hæmorrhage and destroy the few pathogenic germs which may have come from the surgeon's hands into the wound. Perhaps in general septicæmia intravenous injections of quinine might be useful.

Cancer and Malaria.

In a paper read before the German Association of Naturalists and Medical Men, and published in the *Deutsche Medicinische Wochenschrift* Professor Löffler has suggested the treatment of cancer by inoculation of malaria blood. In the course of an historical study of malaria he has found that several ancient authorities mention cases in which malignant growths disappeared when quartan fever had developed. He was therefore of opinion that malaria might, in fact, be made available as a therapeutic agent, and that injection of malarial blood might be used to produce malaria in a patient suffering from malignant disease. This suggestion was not of a nature akin to the endeavours that have been made to cure cancer by inoculation of erysipelas, for erysipelas was a disease which could not be arrested when once it had developed itself, whereas the administration of quinine would cure malaria at any time. Professor Löffler drew attention to the circumstance that carcinoma has become more prevalent since the decrease of tuberculosis. The increase of cancer also coincided with the decrease of malaria in Europe and it might be asked whether there was any connexion between these facts. He therefore suggested that a collective investigation should be made in tropical countries in order to ascertain whether cancer was less frequent in malarial districts than in others.

Russian Patients in Berlin.

Like all the other great capitals of Europe Berlin is visited the whole year round by a large number of foreign patients who come to consult specialists. The great majority of the patients are from the east of Europe, and whereas 20 or 30 years ago Vienna was the city to which people went for medical advice from the Eastern States of Europe, Vienna is now not so much in favour as Berlin, especially as far as Russian patients are concerned. Many of these patients have no knowledge of German or, indeed, of any other language than Russian. It often happens that they come to Berlin without having been advised by their ordinary medical attendants to do so, and that when here they do not lay out their time and money to the best advantage. Noticing this, a Russian medical man, Dr. Semjon Lipliawsky, some months ago established here an institution termed the "Russian Institution for Medical Consultations," the aim of which is not only to advise Russian patients and to inform them as to the specialists whom they should consult, but also to facilitate the work of the latter by furnishing them with full details of the history of the cases and other information which the patients from want of knowledge of German might be unable to give. In the laboratory of the institution the preliminary examination of urine, &c., is performed. The institution is not only in communication with the Berlin specialists, but also with the medical attendants of the patients in Russia, the latter being made acquainted by the institution with the results of the consultations and the nature of the treatment prescribed. The institution also undertakes to supply such information and assistance as may be of use to Russian medical men who wish to stay here some time for post-graduate study. It obviously meets a want, as in its first four months of existence it was resorted to by no less than 357 Russian patients. The number of patients coming from other countries must be very considerable, judging from the fact of the existence of an institution which serves as an interpreting and information agency for the patients of a single nationality. When it is considered that only a portion of the Russian patients use the institution and that those of other foreign nationalities are not concerned, it may be concluded from the above that the importance of Berlin as an international medical centre must be very great.

Nov. 26th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Canadian Medical Graduates and the Imperial Army.

DESPATCHES have been received by cable by the Militia Department at Ottawa announcing that a Canadian medical graduate has been refused permission to serve on the British medical staff in South Africa. The action of the home authorities in this connexion has raised the question amongst military medical men as to what has become of the promised Imperial legislation which it was thought would have been introduced into the House of Commons and which would have permitted duly qualified and certificated graduates of colonial medical colleges to enter the Imperial service. The announcement of this legislation was made from the Canadian Militia Department some months ago.

Raising the Standards at McGill University.

The Faculty of Applied Science have taken the preliminary step in what will probably be an advance in the standard of the examinations all round. The gist of this advance is seen in the following notice to the students which was recently posted on the college boards: "It has been decided by the faculty that the number of marks for pass-standing in any subject shall be 40 per cent.; for second-class honours, 60 per cent.; and for first-class honours, 80 per cent." There are some 300 students in the Faculty of Applied Science, and the change is not by any means a popular one with them. In the Faculty of Medicine it is altogether likely that the standard will soon be advanced from four years of nine months each to a course of five years of nine months each. It is said to be the desire of the General Board of McGill University to place the examinations on an even footing with those of the London, the Edinburgh, and the Dublin Universities.

The Problems of Population.

The Provincial Synod of the Anglican Church recently held a meeting at Montreal and a matter of very general interest was brought up and discussed. This was the report of the Committee on Vital Statistics which for the past three years has been working on three very important problems—viz., the birth-rate in the province of Ontario, infant mortality

(especially in the province of Quebec), and tuberculosis. The Provincial Synod has jurisdiction over the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island. The committee have found that complete statistics are available only for the two first-named provinces, the statistics for Nova Scotia being very brief, while apparently there are no records kept for New Brunswick and Prince Edward Island. The following shows the birth-rate per 1000 population in Ontario and Quebec for the years 1896, 1897, 1898, and 1899 respectively—20·7, 20·9, 20·4, and 19·4, or a rate of 38·57, 35·91, 35·70, and 33·46. Ontario has an abnormally low birth-rate, lower than that of any European country, but not lower than that of some of the adjoining American States, notably Michigan and New Hampshire, the former being 18 in 1898 and the latter 19 in 1895. In both Ontario and Quebec the birth-rate is ever decreasing. One of the main causes assigned for this continued decrease is "the use of preventives, information as to which is spread far and wide by advertisements in the public press and otherwise." The committee recommend that the clergy should discuss the matter freely from their pulpits. Quebec has an appalling infant mortality; an average of about 14,500 children under five years of age die annually, nearly one-half of all the deaths in the province. As to tuberculosis, the percentage in 1899 in Ontario and Quebec is respectively as follows: 11·9 for Ontario and 8·7 for Quebec, of all deaths.

Licence to Practice Medicine in the Yukon Territory.

An ordinance respecting the profession of medicine and surgery, known as "The Yukon Medical Ordinance," was assented to on Sept. 24th, 1898. By it the medical profession is made a body corporate under the name of "The College of Physicians and Surgeons of the Yukon Territory." The council consists of five members. Every practitioner entitled to vote may vote for the five members during an election to the council. Section (*a*) of Article 33 of the ordinance refers to British practitioners and says: "Any person who at the time of his application shall furnish proof that his name is on the Register in Great Britain and Ireland" the council shall admit him upon the Register. Each licentiate must pay an annual fee of not less than 20 dollars and not more than 50 dollars at the option of the council. Article 55 says: "The fee for registration under any clause of this ordinance is 100 dollars." There are at the present time 40 names on the Register, although all are not now practising in the Yukon Territory.

Nov. 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

United States Marine Hospital Service.

THIS is a bureau under the Treasury Department, conducted by a surgeon-general. The hospitals under its direction are maintained by a tax imposed on tonnage. The expense of national quarantines is paid by appropriations of Congress and the cost of suppressing epidemics is met by a special fund. The Marine Hospital Service at present consists of a surgeon-general, 29 surgeons, 21 past-assistant surgeons, and 56 assistant surgeons—a total of 107 commissioned officers who are appointed by the President by and with the consent of the Senate. A candidate for admission into the service must pass a competitive examination before a board composed of officers of the service. Officers of the service are not appointed to any special station, but are subject to change of station at any time in compliance with orders. There are 129 acting assistant surgeons, appointed by the Secretary of the Treasury, for duty at ports where the amount of work does not justify the detail of a commissioned officer. There is a corps of 45 pharmacists in the service, known officially as stewards. There are 22 United States marine hospitals, together with 115 additional relief stations, in the various ports of the country. These hospitals are on both the Atlantic and Pacific seaboard, on the Gulf of Mexico, on the chain of Great Lakes, and at many of the larger river cities. A new hospital has just been opened in Alaska and relief stations have been established at San Juan and Ponce in Puerto Rico, and at Honolulu. The reports of the service show that more than 50,000 sick and disabled seamen of the merchant marine are treated annually. A sanatorium for consumptive seamen has been established at Fort Stanton in New Mexico, in the heart of a dry and equable climate. Up to April 1st there were 144 patients on its records, of whom it is stated that 17 have recovered, 33 have improved, and 17 have died. In order to assist the home quarantines an inspection and information service is maintained at some of the foreign ports, especially those where epidemics exist or where infectious diseases are apt to prevail. It is the duty of the officers of the service stationed at these points to issue the bills of health to vessels leaving for the United States. For instance, sanitary inspectors are stationed at Hong-Kong, Yokohama, and at Central and South American ports, to keep plague, fever, and cholera from vessels bound for the United States. The service also has insular quarantines and inter-State quarantines under its supervision. The prevention of the spread of yellow fever has been one of the chief works of the service since Congress passed the inter-State law. All immigrants coming into this country must be examined by a surgeon of the Marine Hospital Service whose duty it is to detect those suffering from a dangerous, contagious, or loathsome disease. All such patients are either sent back to their homes or are kept isolated in a separate hospital until they are cured and free from the danger of conveying infection. The hygienic laboratory of the service is one of its most valuable and important features. It is in the charge of a director, who is an officer of the service and has several assistants. The investigations of this branch of the service consist of studies of the cause and methods of spread of infectious diseases, of the value and strength of disinfectants, of the value of vaccines, of the method of manufacture of antitoxic serums, the pollution of water-supplies, &c. During the last year the hygienic laboratory made and distributed over 100,000 doses of "vaccine" against bubonic plague, which were distributed to the Philippines, Honolulu, and San Francisco. Bulletins are issued from time to time giving the results of the work done in the laboratory.

The Army Canteen Question.

The abolition of the army canteen, which was accomplished by an Act of Congress at the earnest solicitation of a band of enthusiastic temperance reformers, has since that event been the cause of much and heated controversy. The Army Medical Corps of the United States appear almost to a man to be in favour of the restoration of the canteen system. Major Louis Seaman, surgeon in the United States army, at the annual meeting of the army surgeons and again at the meeting of the American Medical Association, pointed out in the plainest possible language the evil that had already been done to the health and morals of the soldier by the abolition of the canteen, and declared that re-introduction of the system was called for at once. At the meeting of the American Public Health Association held recently at Buffalo the canteen question was made the subject of discussion and the opinions of Major Seaman were re-affirmed. Captain Edward L. Munson read a paper in which he demonstrated by numerous statistics that since the canteen was first introduced the health of the United States army had been much better than when the system was not in force. Assistant-Surgeon-General Charles Greenleaf, late chief surgeon of the United States army in the Philippines, strongly confirmed Captain Munson's statements, and Captain Gihon, late chief medical director of the United States navy, spoke in a similar strain. The meeting was so convinced of the benefits of the canteen system that almost without a dissentient voice a motion was passed condemning the action of Congress in abolishing the canteen and recommending its early restoration.

New York City Board of Health and Malaria.

The Board of Health of New York City has recently taken action with regard to the prevention of malaria within its limits and has passed the following resolutions:—

Whereas recent investigations have shown that malarial fever is an infectious disease and can be largely prevented by the adoption of simple precautions, and whereas it is the desire of the Department of Health to prevent the extension of malarial fever which now exists in some of the boroughs to the other boroughs, and to restrict its prevalence in those boroughs, therefore be it resolved—

That all public institutions, hospitals, homes, asylums, &c., be required to report all cases of malarial fever which come under their observation and give information as to whether the attack is a primary infection or a relapse, and the address where the disease was probably contracted;

That all physicians of New York be requested to furnish similar information in regard to patients suffering from malarial fever under their care;

That the circulars of information of the Department regarding "the causation and prevention of malarial fever" be mailed to the addresses

in which malarial infection has apparently been contracted and also to the addresses from which the cases are reported, when these are different;

That postal cards for furnishing the required data be prepared and forwarded to institutions and physicians for reporting cases of malaria which come under their observation, as is done in other infectious diseases.

Milk-supply of New York.

The Commission appointed to look into the milk-supply of New York City has recently ended its labours and handed in its report. From this the fact is gathered that the milk retailed in New York is not so good as it might be. The standard prescribed by the Commission is that the acidity must not exceed 3 per cent., that the milk must not contain over 30,000 bacterial germs per cubic centimetre, and that the butter-fat must reach 3·5 per cent. None of the milk examined by the Commission reached this standard. In 20 samples examined on Nov. 1st the lowest number of germs was 90,000 and the highest was 2,800,000. On June 29th, with the thermometer at 90° F., in 20 samples examined the lowest number of germs was 240,000 and the highest was 516,000,000.

Nov. 18th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Consumption.

ONE effect of the International Congress on Tuberculosis has been to arouse Australian authorities to a greater activity. In Sydney the medical staffs of the Prince Alfred, Sydney, and St. Vincent's Hospitals met to discuss the measures that should be taken for more effectively dealing with tuberculosis. It was decided to ask the Mayor of Sydney to convene a public meeting to consider the subject. The meeting was held and the Mayor (Sir James Graham, M.D. Edin.) said it had been convened with the object of enlisting public sympathy in regard to a matter in which Sydney was certainly behindhand. In Sydney at present when a consumptive patient sought admission to the metropolitan hospitals he was sent away, as it would not be right to introduce such cases and place them in close proximity to other patients under treatment for other maladies. The only places he could go to were the Queen Victoria Consumptive Home at Thirlmere, which had a very limited number of beds and limited finances, or to the Liverpool Benevolent Asylum. If not taken in at either of these institutions he went back to his little home to infect others in the house and to sit in the parks and expectorate on the grass multitudes of parasites to be blown about and infect others. It was a clear duty of the State to make provision for the exclusive treatment of those who were a source of danger to themselves and all around them. Dr. Sydney Jamieson moved:

That since consumption is an infectious disease it is the duty of the State to adopt reasonable and effective measures for the prevention of infection.

The motion was carried unanimously. Dr. Sydney Jones moved:—

That a special hospital for advanced cases of consumption, which are the worst sources of infection, is an indispensable measure for preventing the spread of the disease.

In speaking to the motion he stated that 16,000 consumptives were moving about Australia annually. Dr. Nash, M.L.C., in seconding the motion, which was carried, said that last year 1067 persons died from consumption in New South Wales, and of these 595 were born in the State and only 6 per cent. had lately come from abroad. It was then resolved that a deputation should wait on the Premier to urge the importance of establishing a hospital for the treatment of advanced cases of consumption in the interests of public health and also that an association should be formed in Sydney for the prevention of consumption. Dr. G. H. O'Neill was appointed secretary of the new association and a number of members were enrolled at the annual meeting of the Queen Victoria Homes for Consumption Fund; the recommendation of the committee to purchase a property at Wentworth Falls for the purposes of a sanatorium and to ask the Government to donate a piece of land at Katoomba for the same purpose was endorsed. The annual report stated that the work had been limited to healing amenable cases of early consumption at Thirlmere Home which had 40 beds. During the year 112 cases were admitted and 104 were discharged. The average cost per bed per annum was £35. A large number of those seeking admission had to be refused as being too advanced. Only patients who could be expected to do some light work were admitted. In the Legislative Council of New South Wales Dr. Nash moved recently:—

That in the opinion of this House the housing of consumptives by the State is not in a satisfactory condition and that it is desirable, in the interests of the public health and for the benefit of the sufferers, that some more adequate provision be made for their accommodation and treatment.

As a result of two visits paid to the State Benevolent Asylum at Liverpool it appeared to him that it was necessary to alter existing conditions. Over 100 consumptives were housed at the Liverpool Asylum. In the largest wards there were 30 consumptives—the beds being four deep. In the same building were 600 or 700 old people suffering from senile decay, and they should not be subjected to such possibilities of infection. Five years ago the Public Works Committee reported on the erection of a destitutes' home at Rookwood, and evidence was taken in regard to the inadequate provisions for housing consumptives. The medical advisers of the Government had on several occasions recommended the removal of all patients from Liverpool Asylum and the committee recommended the same course. Dr. MacLaurin supported Dr. Nash's statements and the motion was carried. In Melbourne also action is being taken to consider the best means of checking the spread of consumption. Over a year ago a committee was appointed by the various medical societies to deal with the subject, but until recently nothing was done. Now, however, the committee has convened a conference of representatives of various charitable organisations, friendly societies, municipal councils, and religious associations, which has decided "that the time has come for founding an association for the prevention and cure of tuberculosis on the lines of the National Association in England," and arrangements were made for holding a public meeting to form the proposed association.

Outbreak of Cerebro-Spinal Meningitis.

An extensive epidemic of cerebro-spinal meningitis has occurred at Port Pirie in South Australia. It is highly infective and fatal in character. The schools have been closed and people are leaving the town with their children in large numbers.

Vaccination in New South Wales.

A report recently presented to the Legislative Assembly in New South Wales showed that the number of births registered during the year 1900 was 37,146. The number of persons vaccinated was 921, of which vaccinations 908 were successful. Of the successful cases 349 were persons above the age of 10 years. Dr. F. Tidswell, of the Public Health Department, who supplied the report, said: "It will be seen that very few of the children born during the year were vaccinated, and a glance at the percentage for past years will show that very little attention is paid to this matter. We are practically an unvaccinated community."

Hospital Sunday Fund, Melbourne.

The twenty-eighth annual meeting of the Hospital Sunday Fund was held recently at the Melbourne Town Hall. The committee reported that the amount realised by the appeal last year had been £6097, exceeding that for the previous year by £50. Of the total amount available £5248 5*s.* 2*d.* had been distributed on the basis of expenditure amongst the following institutions: Melbourne Hospital, £1301 11*s.* 2*d.*; Alfred Hospital, £542 2*s.* 3*d.*; Children's Hospital, £735 10*s.* 5*d.*; Women's Hospital, £606 10*s.* 1*d.*; Benevolent Asylum, £425 16*s.* 11*d.*; St. Vincent's Hospital, £385 17*s.*; Austin Hospital, £466 9*s.* 6*d*; Homœopathic Hospital, £292 18*s.* 7*d.*; Eye and Ear Hospital £284 1*s.* 7*d.*; Emigrants' Aid Society, £127 9*s.* 4*d.*; and Melbourne District Nursing Society, £79 18*s.* 4*d.* A further sum of £470 had been allocated in special votes as follows: Richmond Dispensary, £35; Convalescent Home for Women, £125; Convalescent Home for Men, £125; Victorian Sanatorium for Consumptives, £110; Queen Victoria Hospital for Women, £75. The new system of distribution, based upon the expenditure instead of the revenue of the participating charities, had worked out to the entire approval of the authorities of the various institutions.

Rival Nursing Associations.

As previously stated, the trained nurses in Victoria have

formed an association and a member of it was appointed matron of the Albany Hospital, New South Wales. The committee of the hospital were therefore notified that as the matron was not a member of the New South Wales Association of Trained Nurses the Government subsidy to the hospital would be withheld, and that none of the probationers under the matron would be eligible for employment in any other State hospitals. The difficulty was solved by the matron, who was thoroughly qualified for the post, resigning. Dr. Manning, president of the New South Wales Association, which arrogates to itself the title of Australasian and refuses reciprocity to the Victorian Association, has written to the press explaining that the question of reciprocity is under consideration by his council and that the difficulty was created by the hasty resignation of the matron from the New South Wales Association, of which she had been a member.

Fresh-Air League.

The tenth annual report of the Sydney Fresh-Air League stated that the past season had been most satisfactory. 110 children, 101 women, and 18 men had received the benefits of the league. Farm and cottage homes were now fully established in various suitable districts. Over £400 had been expended at a cost for working expenses of £24, owing to all the work being voluntarily performed.

Oct. 15th.

Obituary.

HENRY SUTHERLAND, M.D., M.A. OXON., B.A. CANTAB., M.R.C.P. LOND.

DR. HENRY SUTHERLAND, whose death, from heart disease after four months of suffering most patiently borne, occurred on Nov. 19th, came of a distinctly medical stock. He was the second of the six sons of Alexander John Sutherland, M.D. Oxon., F.R.C.P. Lond., F.R.S., who practised at Richmond Terrace, Whitehall, and a grandson of Alexander Robert Sutherland, M.D. Edin., F.R.S., who was in practice in Parliament-street, Westminster. His great grandfather, Alexander Sutherland, also practised medicine at Great Queen-street, Westminster. Alexander Robert, Alexander John, and Henry Sutherland were all specialists in psychology, Dr. A. R. Sutherland having, in the early part of the last century, purchased a private asylum at Fisher House, Islington, and subsequently having originated two asylums for female and male patients at Otto House, Hammersmith, and Blacklands House, Chelsea, respectively.

Henry Sutherland, who was born on Dec. 28th, 1841, enjoyed the rather unusual distinction of having been educated at two public schools, Westminster and Radley, and at two universities, Oxford (Christchurch) and Cambridge (Downing). He received his medical education at St. George's Hospital, London, and Addenbrooke's Hospital, Cambridge. He took the M.A. and the M.B. Oxon. degrees in 1869, proceeding to the M.D in 1872. He became B.A. Cantab. in 1867, and M.R.C.P. Lond. in 1870. He studied insanity at Bethlehem Hospital and at the West Riding County Lunatic Asylum at Wakefield, where he was resident assistant medical officer under Dr. (now Sir) James Crichton Browne. After leaving Wakefield he returned to London and commenced practice as an alienist, and in 1872 was appointed lecturer on psychological medicine to the Westminster Hospital, a position which he held for some 15 years. He had had great experience in carrying out the treatment of forcible feeding of insane patients and invented a tube and a gag for use under such circumstances.

In addition to his purely psychological work he was at the time of his death, and had been for more than 30 years, physician to the St. George's, Hanover-square, Dispensary. He was a Fellow of the Royal Medical and Chirurgical, Obstetric, and Medical Societies and a Member of the Medico-Psychological Association, and of the Pathological, Clinical, Neurological, and West London Medico-Chirurgical Societies. He was the author of a "Directory of Justices in Lunacy" and contributed the articles on "Feeding (Forcible) of the Insane" and "Menstruation and Insanity" in Tuke's "Dictionary of Psychological Medicine." He also published various papers in the West-Riding Asylum Medical Reports, the *Journal of Mental Science*, and in the columns of THE LANCET and other medical journals. Both his grandfather and his father were associated with the late Dr. Conolly and the late Dr. Monro in their successful efforts to secure more humane treatment and better conditions of existence for the insane, and he himself was happily brought up in the traditions of that excellent school.

Some years ago Henry Sutherland was well known as a most competent fencer, having won the "prize foils" at both Oxford and Cambridge; and he frequently gave evidence in later days of his skill in fencing at the assaults-at-arms of the London Athletic Club. It may also be mentioned that in his university days he ran third for the mile race at Christchurch, Oxford, and also rowed in the Downing eight at Cambridge. He was a well-known and enthusiastic Freemason, having been initiated into Masonry 40 years ago, whilst an undergraduate, in the Apollo University Lodge, Oxford. From that time forward he never ceased to take a deep interest in Freemasonry. Indeed, he was at the time of his death Worshipful Master of the Old Westminsters' Lodge, a lodge composed of brethren who, like himself, had been educated at Westminster School. He was one of the founders of this Lodge and had, previously to his election as Master, continuously served the Lodge from its consecration in 1888, first as steward and subsequently as secretary. He was also at the time of his death secretary of the Grand Stewards' Lodge, of which he was a Past Master, and he had passed through the chair of the Shakspeare Lodge, of the White Horse of Kent Lodge, and of other Lodges. On the occasion of the celebration of the twenty-fifth anniversary of the appointment of the Prince of Wales (now the King) as M.W. Grand Master he was one of the 25 brethren who specially received the honour of Grand Office, he being appointed a Past Grand Deacon. The qualities of Henry Sutherland's abilities were, perhaps, solid rather than brilliant. He was a man who, undertaking anything, never looked back, but went steadily through till he had accomplished his work. Industrious, thorough going, and trustworthy, he was one of those practitioners who quietly and unostentatiously do good service to, and maintain the honour and dignity of, the profession. Generous and kind-hearted, he was highly esteemed by his colleagues and his patients, and his death at a comparatively early age (he had not quite completed his sixtieth year) will be keenly and long felt by his many friends. Dr. Sutherland leaves a widow to mourn her loss.

The funeral took place on Nov. 22nd at Brompton Cemetery, amongst those attending being Dr. G. Fielding Blandford, Dr. T. Seymour Tuke, Mr. T. Wakley, Jun., and other medical friends. Wreaths were sent by his Masonic brethren of the Grand Stewards' and Old Westminsters' Lodges, Brother W. E. M. Tomlinson, M.P., who was the first Master of the latter Lodge, Brother J. Barnes Liberty, the W.M. elect, and the Treasurer being present to pay a last tribute of affection and respect to their departed Worshipful Master.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Francisco de Castro, Professor of Clinical Medicine in Rio de Janeiro.—Dr. de Rossi, Professor of Laryngology in the University of Rome.—Dr. von Liebermeister, Professor of Clinical Medicine in Tubingen.

LIBELS ON A MEDICAL MAN.—At the Devon Assizes held on Nov. 20th, before Mr. Justice Bruce, Clara Cooper pleaded guilty to publishing defamatory libels concerning Dr. C. N. Lovely, a medical practitioner of Dawlish. The libels, contained in 58 letters, were absolutely unfit for publication. The London and Counties Medical Protection Society prosecuted and their counsel stated that they had always felt that the state of the prisoner's mind could not be normal and they had in consequence had her examined twice by a medical practitioner. This gentleman formed the opinion that, although at present the prisoner was fit to plead, at the time of the publication of the libels she was not of sound mind. The judge sentenced her to six months' imprisonment in the second division, intimating that if her mind was affected the Prison Commissioners would deal with the case.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE seventy-second session of the General Council of Medical Education and Registration was opened on Tuesday, Nov. 26th, in the hall of the Council, the President, Sir William Turner, being in the chair. Only two members of the Council were absent at the opening of the session—Sir William Gairdner and Mr. W. H. Power. We regret to learn that Sir William Gairdner will be unable, owing to recent illness, to attend the present session.

The present Executive Committee of the Council consists of Sir William Turner, Dr. Atthill, Mr. Bryant, Dr. Glover, Dr. MacAlister, Sir Christopher Nixon, Dr. Pye-Smith, and Dr. Heron Watson. A meeting of the Executive Committee was held on Monday, November 25th, at which among other business Mr. H. E. Allen, the registrar, read a report of considerable interest concerning the Council's advertisements. He accounted for the amount spent in this way, which he put at slightly over £100 per annum on an average during the last four years, by saying that there had been inaccuracies in the Medical Register both as to addresses and unreported deaths owing to no circular letters under Section 14 having been issued to all practitioners for some years, so that it was desirable to call general attention by advertisement to the necessity that existed for medical men to send in notices of changes of address to the Registrar. Again, when important resolutions were adopted by the Council—in 1897 with regard to the employment of unqualified assistants, in 1898 with regard to giving assistance to unregistered dentists, and in 1899 with regard to employment by medical aid associations—it was desirable that these pronouncements of the Council should be made publicly known. He considered, however, that the necessity for these advertisements had now largely ceased to exist. During the three years 1898, 1899, and 1900 circular letters under Section 14 were sent to every practitioner within the province of the English Branch Registrar, and the Branch Registrars in Scotland and Ireland have taken similar effective steps to procure correct addresses. The important resolutions of the Council had also, he said, been so far as possible circulated with these letters, while, with the President's sanction, advantage is to be taken of the elections this year of Direct Representatives to circulate the resolutions among all practitioners resident in England or Scotland. A similar opportunity will present itself next year as far as England is concerned when Mr. Horsley's tenure of office will expire, Mr. Allen promised that in 1903 the issue of letters under Section 14 would be resumed. We are glad to learn from this report that the systematic revision and correction of the Medical Register which we have more than once pointed out in these columns must be undertaken is to a great extent accomplished; and we are particularly glad to see that the Registrar does not propose to rest on his oars, but intends to take up again in 1903 his valuable and arduous task.

Sir William Turner's address in opening the proceedings of the Council was a brief and practical one. The medical profession will read with approval his assertion of the paramount importance of the Council not losing its hold on the standard of general education to be required from students of medicine. Many of us, like Sir William Turner, can recollect the day when some of the leading examining bodies gave their medical diplomas to candidates whose general education had never been tested, or tested only in a very meagre way; and some of the trials of the medical profession have resulted. We feel sure that the Council will serve the best interests of the profession by maintaining as high a standard of general education among the students as may be practicable.

Sir William Turner's graceful words of regret at the resignation of Dr. Glover from the Council upon which he has sat for 15 years as a Direct Representative were received by the Council in a manner that must have been gratifying to Dr. Glover. There was no doubt that the whole meeting was in accord with their President's view as to the character and value of the work done by Dr. Glover during his long period of office.

Certain amendments of the Standing Orders of the Council with regard to penal removals from the Medical Register were agreed upon *in camerâ* on Tuesday. Everyone knows that the penal powers of the Council have been considerably hampered by two facts: (1) that some of the offences upon which they have to adjudicate are termed "infamous conduct in a professional respect" when "infamous" is not a fair adjective to apply; and (2) that removal from the Register is often too heavy a punishment for offences that cannot be punished in any other way. The amendments have to some extent been dictated by the Council's recognition of this position. Formerly, if the Penal Committee reported a *primâ facie* case against a practitioner a motion was put to the Council that the incriminated person had been guilty of "infamous conduct in a professional respect." The Council might resolve to that effect, and then, feeling the cruelty of doing otherwise, omit to order the name to be removed from the Register—a proceeding that placed the Council in a false position. Under the new amendments the Council first decide if they will pronounce judgment on the case at all or will delay consideration of it. If the members decide to deal with the case they vote to a motion "that the facts alleged against —— have been proved." If this motion is carried the Council can then decide whether the name of the practitioner shall be erased from the Register for infamous conduct in a professional respect.

The seven Scotch practitioners who appeared before the Council at the instance of the Pharmaceutical Society of Great Britain for employing assistants in the sale of poisons, who were not legally qualified so to act, signified their regret for the commission of a professional offence. A pronouncement is promised by Sir William Turner, and awaited by the whole profession, upon this very important and delicate matter.

TUESDAY, NOV. 26TH.

THE seventy-second session of the General Council of Medical Education and Registration was opened to-day in the Hall of the Council, Oxford-street, London. Sir WILLIAM TURNER, K.C.B., President of the Council, occupied the chair, and all the other members were present except Sir William Gairdner and Mr. W. H. Power, both of whom sent messages to the President saying that they were unable to attend on account of illness.

The President's Address.

The PRESIDENT opened the proceedings as usual with an address.

The Election of Direct Representatives.

The PRESIDENT commenced by referring to the forthcoming election rendered necessary by the compulsory retirement of two of the English Direct Representatives and of the Scottish Direct Representative. He continued:—

Of the three Direct Representatives of the profession whose five years' period of office is about to expire Dr. Bruce and Mr. George Brown again seek the suffrages of their constituents. Dr. Glover, on the other hand, acting under

medical advice, has decided not to offer himself for re-election. The Council will join with me in expressing regret at the cause of Dr. Glover's retirement and in wishing him a speedy restoration to health. We may feel confident that his interest in the public life and work of the profession, in which for so many years he has taken an active part, will continue, and that, although no longer sharing in our discussions, he will be keenly alive to, and possibly may be a critic of, our proceedings. Personally, I should like to state that during the period of 15 years in which we have sat together on this Council, although we have often differed on questions of procedure and policy, I have received from him unfailing courtesy and consideration.

With reference to Malta University the President stated that two applications from Maltese graduates for registration on the Colonial List had been received, while with regard to Italy application for registration had been received from five graduates of Italian universities. After referring to the ill-fated Penal Powers Bill, introduced into the House of Commons by Sir Richard Jebb, the President proceeded:—

Examinations.

The inspection of Final Examinations by our inspector, Sir George Duffey, acting along with Mr. Bryant at the University of Dublin, with Dr. McVail at the Royal University of Ireland, and with Dr. Payne at the conjoint examinations of the three medical and surgical corporations in Scotland, has now been completed. In conformity with the requirements of the Medical Act, 1886, and the Standing Orders the reports prepared by the inspector and the member of Council associated with him as visitor have been forwarded to the bodies whose final examinations have been inspected for their observations and remarks. These, I understand, have not yet been received in any instance, so that the reports are not ready for distribution amongst members of the Council, nor can the Examination Committee report respecting them. Dr. Herringham, the Council's inspector specially appointed to be present at the examinations of the Apothecaries' Hall, Dublin, has expressed his willingness to act for another year. As the whole of the medical and surgical corporations in Ireland will have their final examinations inspected next year by the general inspector and the Council's visitor the Council should consider whether the special inspector should be required to attend the Final Examination of the Apothecaries' Hall on the occasion when the general inspector is present. Should his attendance not be considered necessary a motion to this effect must be submitted to the Council in the present session.

The Sale of Drugs by Medical Practitioners.

The Council will have before them on Wednesday seven registered practitioners, residing in the West of Scotland, who are charged with habitually employing for the sale of scheduled poisons persons not qualified to act as chemists or pharmaceutical assistants, and thereby causing such persons to commit breaches of the Pharmacy Act. The Council will recollect that a year ago a case of this kind was for the first time brought under their notice, and that the practitioner in question was admonished; the gravity of the charge was pointed out to him, and the case was adjourned to the June session of the present year. I was then authorised to say that the offence was grave and fraught with danger to the public, but as the case was the first to be brought before the Council, and in view of the assurance given by the practitioner that he would discontinue this conduct, the Council decided to proceed no further with the charge. As regards the practitioners whose cases are now to be investigated it is due to them to state that the offences alleged against them were committed before the Council had pronounced its judgment on the case above alluded to, so that they could not have been informed at the time how serious a view the Council took of an offence of this nature. It will be for the Council to consider whether, after these cases have been disposed of, the time has not arrived to issue a definite declaration on this subject for the information of the profession generally. Another penal case to be brought before you bears on the question of the employment of a registered medical practitioner by a medical aid association which, it is alleged, systematically practises canvassing for the purpose of procuring patients.

General Matters.

The Pharmacopœia Committee will report on the steps taken to secure the adoption of the Addendum by India and the Colonies, and on a proposal by the Government of India to purchase 3500 copies, subject to an alteration in the formulæ of a few preparations. The Public Health Committee, the Examination Committee, and doubtless some other committees will report on matters appertaining to their respective departments. Of the subjects to be reported on by the Executive Committee I may especially refer to proposed modifications in the Standing Orders which govern the judicial procedure and decisions of the Council, and the recommendation for the approval of the Council of a list of scientific institutions at which medical study may be commenced. The Education Committee have had under consideration several important subjects. We may look for a report on the steps which they have taken in order to carry out the recommendation of the Council that the standard of preliminary examination required by some of the examining authorities should be raised. The Council has asked the Education Committee to consider and report on the questions involved in motions proposed at the June meeting by Dr. Bruce and Mr. Ball, in which it was suggested that, in addition to the examination on the subjects of general education, on which the existing arrangements for the registration of students of medicine are based, a second or scientific registration of students who have passed in chemistry, physics, and biology should be established by the Council, and that the period of medical study should be four years after the second registration. In the discussion of this new question I hope that both the Education Committee and the Council will bear in mind the paramount importance of the Council not losing its hold on the standard of general education to be required from students of medicine. I can recollect the day when some of the leading examining bodies in our profession gave their diplomas to candidates whose general education had never been tested, and others did so when the test was of the most meagre character.

The recommendation that all intending students of medicine should pass an examination on subjects of general education, and the consequent establishment of a Students' Register, formed an important epoch in the history of the Council and in the educational progress of the profession. Although no special statutory powers had been conferred on the Council to require the registration of students all the examining authorities were consenting parties, and agreed not to admit candidates for professional examinations unless their names had been previously placed on the Students' Register. Acting along with the qualifying bodies, the Council has been able to require a standard of general education from entrants to our profession which, in so far as can be provided by an examination test, secures that they possess a school education sufficient to enable them with intelligence to engage in professional study. The period of professional education has also been extended to five years, and an influence for good has been exercised on the training of the younger generation of practitioners. I regard with apprehension a movement which, by the withdrawal of one or more of the qualifying bodies from an agreement in which all had concurred, would destroy unity of action in the matter of students' registration, and would nullify the influence of the Council.

In conclusion, I would remind the Council that on April 5th, 1898, I was elected to the honourable position of your President. No limitation or condition is expressed in the resolution to which you arrived, but it appears to me that I ought to regard the resolution as expressive of the intention of the Council that I should be elected for the unexpired period of my then tenure of office as the representative of the University of Edinburgh on the Council, and not for the full period of five years contemplated by the Act of 1886. As the five years for which I was appointed by the University in 1896 expires on Dec. 18th, and as the Medical Act, 1886, requires the President to be a member of the Council, my period of office as President should, in my judgment, although the University has again chosen me as its representative for another period, terminate on that day. As it would be highly inconvenient for the Council to meet on Dec. 18th for the special purpose of choosing a President, I intend to place my resignation in your hands at the present meeting of the Council, so that before you separate you may proceed to the election of a President for another period.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the Council thanked the President for his address and asked him to allow it to be printed in the minutes.

The Service Examinations.

Mr. ALLEN, Registrar, presented a table showing the results of the competition held on August 5th, 1901, for commissions in the medical staff of the Royal Navy. Of the six candidates who competed four were passed for vacancies and two were rejected, one of the latter being found deficient in medicine and the other in medicine, anatomy and physiology, and chemistry and pharmacy.

Dr. HERON WATSON, seconded by Sir CHRISTOPHER NIXON, moved that the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy for the information supplied.

Mr. HORSLEY asked how it came about that there was no return with reference to the army.

Mr. BROWN put the same question with regard to the Indian Medical Service.

Dr. NORMAN MOORE said that this autumn there had been no examination for the army though there had been one for the Indian Medical Service during the month of August. A letter was written to the examiners saying that in view of what was being done it was not proposed to have an examination for the army this autumn.

On the motion of Mr. BROWN, seconded by Dr. BRUCE, it was agreed to ask for the usual information with regard to the Indian Medical Service examination.

The motion of Dr. HERON WATSON having been passed, the Council decided, on the motion of Dr. BRUCE, to refer the table with regard to the navy to the Examination Committee.

Judicial Procedure and Decisions.

The next business on the programme was the consideration of a report from the Executive Committee in regard to the Standing Orders governing the judicial procedure and decisions of the Council.

The PRESIDENT explained that the amendments suggested were essentially amendments in the form of the resolutions which had to be put from the chair to the Council when it sat *in camerâ* after hearing the evidence in penal cases. As these resolutions were put *in camerâ* it was for the Council now to decide whether the discussion of this report should be taken in open Council or *in camerâ*.

Dr. ATTHILL, seconded by Dr. PYE-SMITH, moved that it be taken *in camerâ*.

Dr. MCVAIL thought that the members of the profession who were deeply interested in this matter should have an opportunity of knowing how and why they arrived at a particular form of procedure. This was a matter affecting the Standing Orders of the Council, and on that ground he thought it should not be discussed *in camerâ*. The situation was of course different when the Council had a particular case before it.

Dr. MACALISTER said that it would be difficult to carry on the discussion without referring to cases which had been considered *in camerâ*.

Mr. HORSLEY took the view that it would be shorter and more useful not to refer to particular cases but to discuss the subject on academic lines.

Mr. BROWN said that there was a strong feeling outside against the increasing habit of the Council to go into *camerâ* when subjects of interest to the profession were discussed.

By a large majority the Council rejected the motion to discuss the report *in camerâ*.

The PRESIDENT said that he proposed to make a short introductory statement. It sometimes occurred to him that the executive power of the Penal Cases Committee was not quite understood by Members of the Council. The Standing Orders laid down that certain forms of procedure had to be gone through. Then they stated that if the committee resolved that the case ought to be withheld from the consideration of the Council the case should not proceed further and the Registrar should inform the applicant of the resolution of the committee. If, on the other hand, the committee resolved that the case was one in which an inquiry ought to be held, the Standing Orders laid down that the President should ask the solicitor to take steps for the institution of an inquiry and for having the case heard and determined by the Council. Now, the point he wished especially to call attention to was that the Penal Cases Committee only referred a case to the Council when it considered that there was a *primâ facie* case. The committee acted somewhat after the manner of a grand jury and the whole testing of the evidence must lie with the Council itself and the decision must be come to by the Council itself after it had heard the evidence. There were two classes of cases to be dealt with. There was the case of the practitioner convicted of a misdemeanour, or felony, or a crime or offence, and there was the case of one who was charged with infamous conduct in a professional respect, and in their Standing Orders they must draw a distinction between these two cases. In this distinction the Executive Committee proposed to make no change. The first motion it was customary to put from the chair was that the Council do proceed at once to pronounce its judgment on the case and no change was proposed in this connexion. In the next motion they proposed a material change. In the earlier years when cases of this kind were investigated it was customary to put to the Council that the accused person had been guilty of infamous conduct in a professional respect and the vote was taken upon that, and he had known instances in which a person had been adjudged guilty of infamous conduct in a professional respect where the Council did not instruct the registrar to erase his name from the Register. It was felt that the Council was placing itself in a false position and so a change was made in the motion. Nothing was said about infamous conduct; it was simply said that the charge made had been proved to the satisfaction of the Council. Then there was a motion that the Council do now adjudge the practitioner to have been guilty of infamous conduct in a professional respect and do direct the registrar to erase his name from the Register. They proposed that the Standing Order should be altered and that the question put from the chair should be, "That the facts alleged against —— in the notice of inquiry have been proved to the satisfaction of the Council." This would be a motion simply as regards the accuracy of the facts and would not involve, as the present words did, that the conduct complained of had been infamous conduct in a professional respect. Several amendments consequent upon this were proposed in the report. For instance, it was proposed instead of saying that the further consideration of the charge proved be adjourned, to say that the further consideration of the facts proved be adjourned.

Dr. MCVAIL took exception to the proposed changes. It was a serious thing, he said, for a practitioner to be summoned before that Council. He knew cases where it had caused serious illness, and he held that a man should not be summoned upon anything which, if proved, was not infamous conduct in a professional respect.

Dr. MACALISTER, to put the discussion in order, moved that the Standing Orders be amended in the manner proposed by the Executive Committee in their report.

Dr. MCVAIL moved that the subject be sent back to the Committee for further consideration.

The PRESIDENT said that he was afraid that he had no choice but to ask the Council to sit *in camerâ*. If they were to go into this question of referring the matter back to the committee he must make a statement *in camerâ*.

The Council then sat *in camerâ* for nearly an hour.

On the readmission of the public the PRESIDENT announced that the Council had decided to amend the Standing Orders in the manner proposed by the Executive Committee in their report.

The Registration of Colonial and Foreign Diplomas.

The Council agreed to receive and enter on the minutes the following report by the Executive Committee, submitted in accordance with the subjoined resolution passed by the General Medical Council on May 18th, 1887:—

"That the Executive Committee be empowered to take the necessary steps for carrying into effect the sections of the Medical Act (1886) relating to the registration of the diplomas of colonial and foreign practitioners, and that the committee report to the Council from time to time their proceedings thereon."

(*a*) IN REGARD TO MALTA.

The Executive Committee report that Part II. of the Medical Act (1886) has been made to apply to Malta, by an Order in Council made on Sept. 26th, 1901, that the amendment of Article 5 of the local ordinance, conditional on which the assent of the Council was on June 5th, 1901, given to the extension, has been duly made; that they have accordingly considered the application made on behalf of the University of Malta for the recognition of its degrees and their registration in the Colonial list of the Medical Register under Section 13 of the Medical Act (1886); and that they have adopted the following resolution:—

Resolved: "That the requirements for the medical degrees of the University of Malta being such as in the opinion of the committee furnish a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery, these degrees be recognised as entitling to registration in the Colonial List."

(b) IN REGARD TO ITALY.

The Executive Committee report that Part II. of the Medical Act, 1886, having been applied to Italy by an order in Council dated March 9th, 1901, application was made to the Privy Council, at the suggestion of the Education Committee, requesting that the Council might be supplied through the proper official channels with such information as to the existing regulations for medical qualifications in Italy as would enable the Council to fulfil its statutory duties under Section 13 (1) of the Medical Act, 1886.

This information having been supplied by the Privy Council, the Committee have carefully examined the Royal Decree of Oct. 8th, 1876, which applies to all Italian universities, and, having satisfied themselves that the regulations provide a sufficient guarantee of the possession, by doctors of medicine and surgery of these universities, of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery, have resolved:—

"(1) That the degrees of Doctor of Medicine and Surgery of all Italian universities should be recognised as entitling to registration in the Foreign List of the Medical Register.

(2) That with reference to applications from Italian medical graduates for registration in the Foreign List, the registrar be instructed to require the applicant to produce:—

(*a*) Satisfactory evidence of identity;

(*b*) Satisfactory evidence of good character;

(*c*) Satisfactory evidence that he is by the law of Italy entitled to practise medicine, surgery, and midwifery in that country;

(*d*) The diploma of doctor of medicine and surgery of an Italian University;

(*e*) Satisfactory evidence in relation to the circumstances (1) (2) (3) set forth in Section 12 of the Medical Act, 1886."

The Council then adjourned.

WEDNESDAY, NOV. 27TH.

The Council resumed work to-day Sir WILLIAM TURNER, President, being in the chair.

Scotch Practitioners and the Sale of Poisons.

The first business was the consideration of the cases of Alexander Stewart of Uphall, registered as Lic. Fac. Phys. Surg. Glasg. 1878, M.B., Mast. Surg. 1880, Univ. Glasg.; Simon Prince Clark, of 59, Dixon-avenue, Crosshill, Glasgow, registered as Lic. Soc. Apoth. Lond. 1884, Lic. R. Coll. Phys. Edin. 1885, Lic. Fac. Phys. Surg. Glasg. 1885; Alexander Whyte Mason, of 586, Springburn-road, Glasgow, registered as holding the triple qualification of Scotland 1893; William Allison McLachlan of Dumbarton, registered as M.B., Mast. Surg. 1874, M.D. 1877, Univ. Glasg.; James Wilson of Dumbarton, registered as Lic. Fac. Phys. Surg. Glasg. 1883; Richard Allan of Dumbarton, registered as Lic. R. Coll. Phys. Edin. 1872, Lic. Fac. Phys. Surg. Glasg. 1872; and John Steele Smith, of 480, Springburn-road, Glasgow, registered as M.B., Bac. Surg. 1900, Univ. Glasg., who had been severally summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you have been guilty of infamous conduct in a professional respect, particulars of which are that you, being a registered medical practitioner, habitually employ as assistant [*or* assistants] for the sale of scheduled poisons a person [*or* persons] not qualified to act as a chemist [*or* chemists] or pharmaceutical assistant [*or* assistants] and thereby cause such person [*or* persons] to commit breaches of the Pharmacy Act.

The complainants are the Pharmaceutical Society of Great Britain.

The plural words in brackets are used in the notices addressed to Mr. Clark and Mr. Wilson.

All the seven practitioners mentioned were in attendance, Mr. Mason having with him Mr. A. R. Ferguson, solicitor, Neilston, while the complainants were represented by Mr. Peter Morison, jun., S.S.C. Edinburgh.

It was arranged that the seven cases should be taken together as one case.

Mr. WINTERBOTHAM, solicitor to the Council, explained that the charges were identical except that in the cases of Mr. Clark and Mr. Wilson there were two assistants mentioned.

Mr. MORISON, in presenting the case for the Pharmaceutical Society, said it was perhaps desirable that he should point out that the legislature had intrusted to the Registrar and Council of the Society the duty of enforcing the provisions of the Pharmacy Act in the interests of the public. It had been suggested by some of the medical practitioners who had been summoned now that the proceedings of the Society were vindictive and were taken to serve ulterior purposes. That was quite a mistake. It was imperative, in the interests of the public, for the Society to take the steps which they had taken, and it was in the interests of the public that the Society appeared on the present occasion. After a full inquiry in the case of Mr. John Martin Thomson this Council on Dec. 3rd, 1900, found that the charge made against Mr. Thomson was proved to the satisfaction of the Council and that the further consideration of the charge proved against Mr. Thomson be adjourned till the next session of the Council. The President further admonished Mr. Thomson and informed him that the Council felt it to be its duty to express its sense of the gravity of the charge and had given him an opportunity to consider fully his position in the interval. Therefore he submitted that on Dec. 3rd, 1900, a clear indication was given to medical practitioners of what was required of them in duty as fair-minded professional men. The judgment of the Council was not accepted by a number of the medical practitioners who kept chemists' shops, and accordingly, in consequence of complaints, the Pharmaceutical Society had to take proceedings. With the exception of two all the convictions of unqualified assistants on which he relied on the present occasion took place subsequently to the judgment of this Council on Dec. 3rd, 1900. On the general question he submitted it was in the public interest that where an open shop was kept, say, in a busy thoroughfare the sale of poisons ought to be supervised either actually by the medical gentleman himself or the shop should be in the hands of a qualified assistant. The chemist was purely a business man. He was a shopkeeper and nothing else. He gave his whole time and attention to his business and he was examined to obtain his qualification in all the requirements which the statutes enacted for the sale of poisons. Against that view they had to consider that a doctor, owing to his professional engagements, must necessarily be outside the shop a good deal, and while he did not suggest that a doctor did not know how to dispense he thought it was fair to say that in the examinations for his diplomas he did not require to have a minute knowledge of the requirements attendant upon the sale of poisons. He would proceed on the assumption that the extracts of the convictions of the unqualified assistants were admitted because they were all official documents, and he argued that the medical practitioners who employed these assistants must be held responsible for their action. It had also been suggested that the Pharmaceutical Society were not acting in good faith, that they prosecuted doctors and did not prosecute chemists, but this was absolutely untrue, and he was able to speak to 26 cases of prosecutions of chemists.

The PRESIDENT intimated that each of the seven practitioners had sent letters to the Council, and he suggested that the writer in each case should read his letter or letters now to the Council.

Mr. STEWART, in his letter, stated that he had given instructions to his assistant that he must not sell scheduled poisons unless he (Mr. Stewart) were on the premises. He regretted what had taken place and he assured the Council that for the future he would comply with the wishes of the Council.

Mr. CLARK said that when he had an unqualified man he expressly told him not to sell scheduled poisons. Now he had a qualified man, and after expressing regret for what had occurred he undertook that it would not happen again.

Mr. MASON read a letter practically to the same effect.

Dr. MCLACHLAN in his letter denied that he habitually employed an unqualified assistant for the sale of scheduled poisons and said that never with his consent had an unqualified assistant sold scheduled poisons. His parochial authorities insisted upon his supplying the poor with drugs, and until quite recently there was no qualified pharmacist in the whole parish, and consequently he had no alternative but to supply drugs. He admitted that his dispenser had been convicted of selling red precipitate ointment to an agent of the Pharmaceutical Society, and if this were contrary to the requirements of this Council then he must make the *amende honorable*.

Mr. WILSON said that his chief reason for having an open surgery was that he had a considerable surgical practice in connexion with the shipbuilding yards and engine works in Dumbarton and accident cases were continually being brought to him which he could not deal with in a private house. He regretted what had taken place and he had now engaged a qualified pharmacist.

Mr. ALLAN explained that poison had been sold contrary to his instructions and that for over 29 years it had been his custom to keep open shop. At the same time he expressed his regret for what had occurred.

Mr. STEELE SMITH denied the charge and said that his assistant had disobeyed his instructions. Now he had locked up all the poisons.

The PRESIDENT said that he was not sure about Mr. Steele

Smith, but he understood that the rest of the gentlemen before the Council took up this position, that they came under an undertaking that in future they would not keep unqualified assistants.

Mr. STEELE SMITH: If my unqualified assistant sells no scheduled poisons can I continue to employ him?

The PRESIDENT: I must call your attention to what the charge is. The charge is, of selling scheduled poisons by the hand of an unqualified assistant.

Mr. STEELE SMITH: Then I will take care that I do not do that.

After the Council had sat in private for a time,

The PRESIDENT announced that the decision was as follows—viz.: That each of the seven practitioners having expressed to the Council their regret for the commission of a professional offence which the Council had declared to be grave and fraught with danger to the public, and having pledged themselves to abstain from any conduct affording similar ground of complaint in the future, the Council resolved to proceed no further in reference to the facts proved against them.

When parties had withdrawn

Mr. YOUNG asked whether it was proposed to take any steps in the direction suggested by the President in his opening address.

The PRESIDENT replied that this matter was under consideration and Dr. MacAlister would put a notice on the subject on the paper.

The Medical Degrees of the University of Malta and the Italian Universities.

On the consideration of the report of the Executive Committee which had been placed on the minutes on the previous day, and which appears as part of Tuesday's proceedings,

Dr. MACALISTER stated that the Committee had been empowered to take action and action had been taken by them in the preparation of a list consistent with the terms of the Medical Act of 1886 which would show Italian applicants for admission to the Register what were the requirements. The report had been put down for consideration in order that any member might have an opportunity of discussing it or asking questions in regard to it, particularly as for the first time it involved the opening of a Foreign List in the Register. With regard to Malta the Council were practically done with the matter by placing the report on their minutes, but so far as Italy was concerned the action thought necessary was set forth in a report of the Executive Committee's meeting of Tuesday.

Dr. MCVAIL elicited the information that there had been delay in the circulation of this report, and moved that the discussion should be deferred until members had had an opportunity of looking over the report.

Mr. HORSLEY, in seconding the proposal, pointed out that in fulfilling the duty entrusted to them the executive had taken upon themselves to lay down that the regulations necessary for medical education in this country were wholly unnecessary when dealing with Italian education. The whole action of the committee was, he thought, not fair to English education.

It was resolved:—

That consideration of the report of the Executive Committee on the medical degrees of the Italian universities be postponed until to-morrow.

Recognised Scientific Institutions.

The Council proceeded to consider a report by the Executive Committee on recognised scientific institutions other than universities or schools of medicine recognised by the licensing bodies, presented in accordance with the desire of the General Council that the list of institutions should be re-arranged by the Committee, as follows:—

The Executive Committee, in pursuance of the Council's Resolution of December 4th, 1900 (Minutes, Vol. xxxvii., p. 143), beg leave to submit for the approval of the Council the following revised list of scientific institutions recognised by licensing bodies.

The list is intended to exclude higher elementary and secondary schools at which boys or girls receive their ordinary education; it also excludes certain municipal and other schools of science and art which purport to give instruction to schoolboys and other young persons preparing for trades and handicrafts and not for the medical profession.

The Executive Committee recommend that if the list is approved in principle, the Students' Registration Committee should be empowered to give provisional approval on behalf of the Council to other scientific institutions of the same status which may hereafter be recognised by licensing bodies. The names of scientific institutions thus provisionally approved would be reported half-yearly to the Council.

Scientific institutions, other than universities or schools of medicine, at which the course of medical study may be commenced by applicants for registration in the Medical Students' Register:—

BRADFORD: Technical College.
BRIGHTON: Technical Day College.
BRISTOL: Merchant Venturers' Technical College.
CAMBRIDGE: Girton College, Newnham College.
CHELTENHAM: Ladies' University College.
DERBY: Technical College.
DUBLIN: Royal College of Science.
EGHAM: Royal Holloway College.
EXETER: Royal Albert Memorial College.
LONDON: Royal College of Science, Bedford College, Birkbeck Institute, East London Technical College, Central Technical College, Westfield College.
NEWCASTLE: Durham College of Science.
NOTTINGHAM: University College.
PRESTON: Harris Institute.
READING: Reading College.
SOUTHAMPTON: Hartley College.

Dr. MACALISTER explained that the list the committee had been asked to revise contained such names as Aberystwith, Bangor, Cardiff, whose colleges formed part of the University of Wales, Birmingham which was part of the University of Birmingham, Liverpool and Manchester Colleges which were part of the Victoria University, and Dundee College which was affiliated to St. Andrews University. There was thus no occasion for these institutions any longer to appear in the list. The information which the committee had received had been obtained from the various bodies interested and every institution recognised by the licensing bodies had been included in the revised list now submitted. Well-known institutions were not included mainly because they were not at present recognised by the licensing bodies, and that was a reason why the committee suggested that the Students' Registration Committee might be empowered by the Council to extend the list from time to time. As a preliminary step in procedure he moved that the list be received and entered on the minutes.

This motion was seconded by Mr. TICHBORNE, and was agreed to after the words "for Ireland, University College" had been added to "Dublin: Royal College of Science."

Dr. MACALISTER next moved:—

"That the list of scientific institutions submitted by the Executive Committee be approved by the Council.

Sir CHRISTOPHER NIXON seconded the proposal.

Dr. NORMAN MOORE said it was quite clear that if the Council wished to have a list at all it was important to consider each particular case and not the whole case. In the preamble of the report it was mentioned as an objection that the committee objected to the inclusion of institutions which purported to give instruction to schoolboys and other young persons preparing for trades and handicrafts and not for the medical profession. But there were many institutions in which education for trades and handicrafts and education for the medical profession were combined. Was that an objection to such institutions? He must remind them that a department of agriculture existed in the University of Durham, while there was to be a department for commerce in the new University of Birmingham. If there was to be objection to such arrangements the Executive Committee ought to be consistent. The Harris Institute at Preston taught needlework. That did not seem to him to be an objection to the institute being recognised, because students taking instruction in other departments occupied in the recess some of their time with the construction of artistic needlework. With regard to other of the colleges mentioned in the list he should like the Council to be informed whether the Girton College and Newnham College at Cambridge, the Ladies' University College at Cheltenham, and the Bedford College of London were equipped for the teaching of physics, chemistry, and biology. Had they biological museums and laboratories such as universities and medical schools had? He did not know. He thought the Council ought to know, because these points were points which seemed to him to show that, if the Council was to recognise a list of institutions of the kind desired, it must take more pains in the investigation of which were the proper institutions than the Executive Committee had yet taken. He did not go so far as to say that all institutions should be visited, but he did say that into their conduct and equipment there should be thorough inquiry. In the meantime he was prepared to move as an amendment:

That Newnham College, Cheltenham Ladies' College, and Bedford College be not included in the list.

If it was afterwards proved that these institutions had

sufficient equipment he should not have the least objection to their inclusion.

Sir JOHN WILLIAMS asked whether this matter should not be taken in conjunction with a report to be submitted later by the Education Committee on a motion and amendment with regard to the conditions for admission to the Medical Students' Register, referred to them in June last, arising out of the consideration of certain communications from the Royal College of Physicians of London and the Royal College of Surgeons of England.

Dr. MCVAIL said that he had meant to move that they should adjourn the consideration of this revised list of scientific institutions until the report was before them.

Dr. NORMAN MOORE objected to any postponement. The two questions, he said, were quite distinct. The list before the Council had nothing whatever to do with the Royal College of Physicians, which had already decided what institutions they might recognise and all of which had been visited by them.

Sir CHRISTOPHER NIXON asked if it was a fact that all the institutions referred to had been visited. He understood it to be the case that there were some which had not been visited.

Dr. NORMAN MOORE: The Royal College of Physicians insist on the power of visitation. All the institutions on their list would be visited in a very short time.

Mr. HORSLEY: Do I understand Dr. Norman Moore to ask whether the Ladies' College at Cheltenham is equipped with a biological museum. I have been there, and I am bound to say that there is a very proper effort on the part of that College to found a biological museum.

Dr. NORMAN MOORE: Is Mr. Horsley satisfied that the equipment is sufficient for the purposes we know the Council wish to serve.

Mr. HORSLEY: I am quite satisfied with the museum.

Dr. NORMAN MOORE: Then I shall remove the name of the Cheltenham College from my amendment.

Sir CHRISTOPHER NIXON considered that the action proposed by Dr. Norman Moore was somewhat strange. Certain institutions had been named to the Council and it was now proposed that a certain number of them should be removed from the list. Did a doubt exist in Dr. Norman Moore's mind whether these institutions had the equipment with which to give the necessary instruction. They might or they might not have. It was uncertain, and yet Dr. Norman Moore proposed to take the drastic mode of removing these institutions. It would be better to postpone the matter until Dr. Norman Moore was satisfied about these several institutions.

Dr. MACALISTER said that with regard to Newnham it was a college in Cambridge but not a college of the University of Cambridge. Students of Newnham, however, preparing for London or Irish degrees had perfectly free access to all the laboratories of the University. Newnham had established biological and chemical laboratories and for physics its students went to the University. The equipment, therefore, for the first years' studies was ample and complete. With regard to Bedford College, it was one of the schools of the University of London and the names of its students were not unfamiliar in the list of those who obtained degrees. There was ample material for their beginning medical studies in Bedford College.

The PRESIDENT thought that Dr. MacAlister should tell them whether institutions of the kind in question required to give instruction in all the three subjects or whether if the institution taught two only of them it should or should not be recognised.

Dr. MACALISTER replied that all the Council and Registrar had to do with the matter was to see that students began their first year in the three subjects or two of them. Dr. Moore's reference to the question as to the institutions in which combined instruction was given for the medical profession and for trades and handicrafts was confusing the issue. He had never recommended that technical instruction should be dissociated in any institution from medical instruction.

The Council then voted on the amendment, which the President declared to be lost.

Dr. MCVAIL maintained that the matter of approving of the revised list of institutions now before the Council was the practical admission of a number of institutions which had not medical schools. If this was to be carried the list submitted must be greatly augmented. If they thought otherwise the list would be quite insufficient, but it was his hope that they would not need any list at all. He moved as a further amendment:—

That the further consideration of the report of the Executive Committee on Scientific Institutions be postponed until after the Education Committee's report on the conditions for admission to the Students' Register has been considered.

Dr. GLOVER seconded the amendment.

Dr. MACALISTER thought that the Council should finish this subject before rising for the day. The approval of the list now would do no more than enable registration to be proceeded with and the list could be extended at convenience. There were many well-known science colleges throughout the country that were not included, but the absence of their names was simply due to the fact that they had not yet been recognised by any of the licensing bodies. The moment such recognition was accorded, then there would be no difficulty in placing them on the list.

Mr. BROWN supported Dr. McVail's amendment.

The PRESIDENT remarked that there was a practical question involved in the consideration of the revised list. It was quite obvious that the list was not a final one, but only a first list. For instance, there was not a Scotch institution included in it, and when he had seen that he was indignant. But Dr. MacAlister had pacified him by saying that none of the institutions of the kind in Scotland were at present recognised by the licensing bodies, but that, as soon as they were recognised, the committee would be prepared to consider their inclusion.

Sir WILLIAM THOMSON said that he should vote for the motion for postponement because it seemed to him so very important and was involved in the question of the conditions of admission of students to the Register. He did not like them taking up one part of a subject on one day and another part on another day, as he had seen this procedure lead to results which were inconsistent with each other.

On a division there voted for Dr. McVail's amendment 14 and against it six, giving a majority for the amendment of eight votes.

The amendment was then put as a substantive motion and was carried without dissent.

Further discussion of the Executive Committee's revised list of scientific institutions to be recognised for first-year's medical subjects was accordingly postponed.

The Council after sitting for a few minutes *in camerâ* adjourned.

THURSDAY, NOV. 28TH.

The Council met again to-day and proceeded to the consideration of penal cases.

Medical News.

UNIVERSITY OF LONDON.—At the M.B. Examination held in October, the following candidates were successful.

First Division.—John Atkins, Guy's Hospital; Hermann Balcan, London Hospital; Janet Mary Campbell, London (Royal Free Hospital) School of Medicine for Women; Frank Challans, London Hospital; Carey Franklin Coombs, St. Mary's Hospital; Alfred Ernest Jones, University College Hospital; Henry Crewe Keates, Guy's Hospital; Robert Kelsall, Owens College and Royal Infirmary, Manchester; Robert Archer Lloyd, St. Bartholomew's Hospital; John Ford Northcott, Guy's Hospital; Richard Horace Paramore, St. Bartholomew's Hospital; Arthur Ricketts, University College Hospital; Charles Archibald Scott Ridout, St. Bartholomew's Hospital; William Morton Robson, Guy's Hospital; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women; John Henry Sheldon, Owens College and Manchester Royal Infirmary; James Ernest Stratton, University College Hospital; Albert E. Thomas, and Charles J. Thomas, B.Sc., St. Bartholomew's Hospital; Kenneth Vincent Trubshaw Guy's Hospital; John Frederick Walker, London Hospital; William H. Wynn, B.Sc., University and Queen's and General Hospitals, Birmingham; and Ernest Eric Young, St. Bartholomew's Hospital.

Second Division.—Kenneth Bush Alexander, Guy's Hospital; Alfred Eaton Baker, Middlesex Hospital; Robert Balderston, Guy's Hospital; Ernest Gilbert Bark, Queen's and General Hospitals, Birmingham, and Birmingham University; Harold Shuttleworth, Barwell, St. George's Hospital; Anthony Birch, St. Mary's Hospital; William Henry Bowen, Guy's Hospital; Sidney Bree, University College Hospital; John Charlton Briscoe, King's College Hospital; Henry Martyn Brown, St. Mary's Hospital; Herbert William Brown, Guy's Hospital; Katherine Chamberlain and Olive Claydon, London (Royal Free Hospital) School of Medicine for Women; Myer Coplans, Guy's Hospital; Louis Edington Dickson, University College, Liverpool, and St. Bartholomew's Hospital; Arthur Edmunds, B.Sc., King's College Hospital; Benjamin Gregory Fiddian, Charing Cross Hospital and University College

Cardiff; Herbert Halliday, Westminster Hospital; Helen Beatrice Hanson, London (Royal Free Hospital) School of Medicine for Women; T. Ayscough Hawkesworth, King's College Hospital; Helena Gertrude Jones, London (Royal Free Hospital) School of Medicine for Women; Ernest William Julius Ladell, St. Bartholomew's Hospital; Ernest Lewis Lilley, Charing Cross Hospital; Edward Vaughan Lindsey, St. Bartholomew's Hospital; Thomas Lister Llewellyn, University College Hospital; Kenneth Fraser Lund, Cambridge University and Royal Infirmary, Liverpool; Zebulon Mennell, St. Thomas's Hospital; Edwin Morgan, University College Hospital; Bertram Wilmore Moss, Guy's Hospital; Frank Herbert Noke, St. Bartholomew's Hospital; William Gibson Parker, Guy's Hospital; William Edward Peck, Joseph Arthur Peedrau, and Howard Welles, Reynolds, University College Hospital; Robert Ellis Roberts, B.Sc., St. Thomas's Hospital; Florence Robinson and Agnes Catherine Scott, London (Royal Free Hospital) School of Medicine for Women; Walter Bernard Secretan, Guy's Hospital; Charles Gabriel Seligmann and Cuthbert Fennessy Sebus, St. Thomas's Hospital; Harold Farley Seymour, London Hospital; Harold Weightman Sinclair, St. Thomas's Hospital; Anna Maude Smith, London (Royal Free Hospital) School of Medicine for Women; Douglas Wilberforce Smith, Guy's Hospital; Alfred Richard Spencer, University College Hospital; Louis E. Stamm, B.A., B.Sc., Guy's Hospital; William Lumsden Stuart, King's College Hospital; John Herbert Sykes, Owens College and Manchester Royal Infirmary; Claude Tessier, Guy's Hospital; Robert Cyril Turnbull, London Hospital; George William Watson; Yorkshire College and Leeds School of Medicine; George Ernest Waugh, Cambridge University and University College Hospital, London; Augustus Joseph Wernet and Frank Cordeux Wetherell, Guy's Hospital; Clarence Barns Whitehead, St. Mary's Hospital; John Thomas Williams, University College Hospital; Arthur Gordon Wilson, Owens College, Manchester, and Edith Louisa Young, London (Royal Free Hospital) School of Medicine for Women.

SOCIETY OF APOTHECARIES OF LONDON.—In November the following candidates passed in the subjects indicated:—

Surgery.—J. E. Bolton (Sections I. and II.), Leeds; E. N. de V. Dawson (Section I.), St. Thomas's Hospital; R. Gauld (Section I.), London Hospital; W. St. A. F. Hubbard (Section I.), Charing Cross Hospital; B. S. O. Maunsell (Sections I. and II.), St. Bartholomew's Hospital; H. S. McLellan (Section I.), Manchester; D. V. Muller (Section I.), Charing Cross Hospital; R. Rees (Sections I. and II.), Cambridge and St. Mary's Hospital; and C. M. Wools (Sections I. and II.), Charing Cross Hospital.

Medicine.—C. H. Allan (Sections I. and II.), London Hospital; P. C. Burgess (Section II.), Middlesex Hospital; A. Dewar, McGill and Westminster Hospital; P. S. Hopkins (Section I.), London Hospital; H. S. McLellan (Section I.), Manchester; D. V. Muller (Section I.), Charing Cross Hospital; B. E. Sansom (Sections I. and II.), St. Thomas's Hospital; and F. I. Trimmer (Sections I. and II.), London Hospital.

Forensic Medicine.—C. H. Allan, London Hospital; J. H. Beasley, Birmingham; S. F. Cheesman, Charing Cross Hospital; A. Dewar, McGill and Westminster Hospital; P. S. Hopkins and C. E. A. Huddart, London Hospital; H. S. McLellan, Manchester; B. E. Sansom, St. Thomas's Hospital; and F. I. Trimmer, London Hospital.

Midwifery.—R. Gauld, London Hospital; H. S. McLellan, Manchester; and F. H. Rotherham, London Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—C. H. Allan, J. H. Beasley, P. C. Burgess, B. S. O. Maunsell, B. E. Sansom, and F. I. Trimmer.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates, having passed the necessary examinations, have been admitted Fellows of the College:—

M. Ballesty, E. T. Coady, F. P. Colgan, H. C. Fox, P. G. Lodge, G. E. P. Meldon, E. F. Stapleton, F. S. Walker, R. J. White, and G. O'Keeffe Wilson.

The following candidates passed the primary part of the Fellowship examination:—

Miss L. A. Baker, M. Deeny, M. Fitzgerald, A. E. Hastings, Miss M. R. Kapadia, E. B. Kenny, J. N. Meenan, W. L. Murphy, H. R. C. Rutherford, J. W. Rutherford, and F. C. Sampson.

THE UNIVERSITY OF BRUSSELS.—The following is the list of successful candidates at the November examination for the degree of M.D. Brux.:—

Alex. Barton, 67, Westbourne Park-road, W.; Arthur W. Viner Clarke, 37, Selhurst-road, S.E.; and Ernest J. Finch, R.N., Devonport.

FOREIGN UNIVERSITY INTELLIGENCE.—*Rome:* Dr. Primo Dorelli has been recognised as *privat-docent* of Anatomy; Dr. Virgilio Ducceschi as *privat-docent* of Experimental Physiology; Dr. Ferruccio Schupfer as *privat-docent* of Neurology; Dr. Oddo Casagrandi as *privat-docent* of Experimental Hygiene and Sanitary Police; and Dr. Carlo Colombo as *privat-docent* of Physical Therapeutics.—*Strasbury:* Dr. Kraft has been recognised as *privat-docent* of Radioscopy and Hydro-therapeutics.—*Turin:* Dr. Angelo Ceconi of Padua has been recognised as *privat-docent* of Medical Pathology.—*Vienna:* Dr. Arthur Schiff has been recognised as *privat-docent* of Internal Medicine; Dr. Emil Knauer as *privat-docent* of Midwifery and Gynæcology; and Dr. Wilhelm Knöpfelmacher as *privat-docent* of Pædiatry.—*Zürich:* Dr. A. Prochaska has been recognised as *privat-docent* of Internal Medicine.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of this association was held in the Governors' room of the National Temperance Hospital (by kind permission of the Visiting Committee) on Nov. 22nd. Mr. Charters J. Symonds presided, and the discussion, which was on the "Advantages of Total Abstinence," was ably opened by Dr. E. Claude Taylor. Several students and others took part in what proved a most interesting and instructive discussion. Tea and coffee (provided by the kindness of the hospital authorities) were served during the half hour preceding the meeting.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of this society for the session was held on Nov. 20th, at the Institution of Civil Engineers, Mr. W. H. Dines, B.A., the President, being in the chair.—A paper by Mr. A. Lawrence Rotch on the Exploration of the Atmosphere at Sea by means of Kites was read by the secretary. Mr. Rotch had for some years past devoted his attention to the use of kites to obtain meteorological observations at the Blue Hill Observatory, Mass., U.S.A., and he had successfully carried on the work of exploring the air there to a height of three miles by several hundred kite-flights executed in varied conditions of weather, whenever the velocity of the wind exceeded 12 miles an hour. Certain types of weather, however, such as anti-cyclones accompanied by light winds, could rarely be studied. Mr. Rotch now proposed the employment of kites carrying meteorographs on steamships, especially on vessels cruising in tropical oceans. He had himself demonstrated the practicability of this scheme, as on August 22nd last he raised a kite to an elevation of half a mile from a tow-boat in Massachusetts Bay, when the velocity of the wind at sea-level varied between six and 10 miles an hour. At the end of the same month, when crossing the North Atlantic from Boston to Liverpool on the steamship *Commonwealth*, he was able to raise kites carrying a meteorograph to an altitude of 1800 feet on five days out of eight. The chief feature of these records was the rapid change of temperature with height.—A paper by Professor J. Milne, F.R.S., on Meteorological Phenomena in relation to Changes in the Vertical was also read by the secretary.

DIPHTHERIA IN PRESTWICH.—Some time ago there was a good deal of diphtheria in the Prestwich Urban District, and Dr. Theodore Thomson of the Local Government Board, went to Prestwich to investigate the causes of its prevalence. In the period 1891–1900 117 cases occurred, 76 of them in 1900, in which year 15 deaths took place, while nine deaths were scattered over the other years. In the first half of the present year 64 cases are known to have occurred, and 12 deaths have been attributed to diphtheria. The great majority of the cases occurred in one locality. Schools were closed on two occasions, and on each occasion this was followed by a decrease in the prevalence of the disease. Dr. Thomson is somewhat severe as to the general sanitary condition of the district, and makes various recommendations, especially as to the gradual extension of the water-carriage system and as to the erection of a destructor. He does not think that the milk was the cause of the prevalence of the diphtheria, nor was it easy to say how far the unwholesome conditions noted may have played a part in it. The effect of the school closure "tends to suggest that the dissemination of diphtheria in the district was aided, and perhaps largely aided, by the transmission of infection from the unrecognised sick to the healthy while at school together." At the meeting of the Prestwich District Board on Nov. 12th the strictures which Dr. Thomson had made were not received with gratitude, the chairman of the Health Committee saying that the death-rate of Prestwich compared very favourably with the rate in districts similarly situated. This recalls what is said to happen in Manchester when specially insanitary houses are condemned. The landlord or agent is always ready with accounts of the remarkable longevity of those who have occupied them. *Apropos* of school closing, Dr. R. T. Turner, the medical officer of the Nantwich Rural District Council, in drawing attention to a serious outbreak of diphtheria at Wybunbury, said that he was sure that it was spread by means of infection at school. He called attention to the practice which children had of cleaning their slates with saliva as a way in which the germs of the disease might be

communicated, and he thought that water should be used and that each child should have his own slate. All the cases occurred where the sanitation was bad.

MEDICAL ALDERMAN.—Mr. John Quick, M.R.C.S. Eng., L.S.A., was on Nov. 15th elected an alderman of the Torquay Town Council.

MR. HENRY GARD, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., was on Nov. 19th elected a member of the Devonport Borough Council.

MR COLSTON WINTLE, L.R.C.P. Lond., M.R.C.S. Eng., has been re-elected vice-chairman of the Bristol Health Committee.

HOSPITAL SUNDAY AT PLYMOUTH.—As a result of the recent Hospital Sunday collections at Plymouth the committee of the South Devon and East Cornwall Hospital, Plymouth, have received over £616.

BARRY SCHOOL BOARD.—At the Barry School Board election held on Nov. 15th nine members were returned, Mr. W. Lloyd Edwards, L.R.C.P. Lond., M.R.C.S. Eng., being at the head of the poll.

CORNWALL COUNTY ASYLUM.—Major C. Norton held an inquiry at Bodmin on Nov. 21st into the application of the Cornwall County Council to borrow £105,000 for the purposes of the extension of the county asylum.

DONATIONS AND BEQUESTS.—By the will of the late Mr. Martin Hope Sutton of Reading £1000 are left to the Royal Berkshire Hospital and £200 to the Reading Dispensary.—Mr. Edward Lucas by his will has left to the Jews' Hospital and Asylum £25; to St. Mary's Hospital, £20; and to the Jewish Lying-in Hospital, founded by the late Baroness Lionel de Rothschild, £15.

THE CONSCIENTIOUS OBJECTOR.—At the meeting of the Warminster Board of Guardians held on Nov. 18th a recommendation was presented suggesting that magistrates' courts should be held in villages to enable conscientious objectors to obtain exemption certificates from vaccination without the loss of a day's work, as now happens. The letter was allowed "to lie on the table," the chairman remarking that the guardians were certainly not going to help to make it more easy for conscientious objectors to obtain exemption than it was at present.

DEATH FROM ANTHRAX.—An inquest was held in Bristol on Nov. 18th upon the body of a grain porter, aged 44 years. The deceased felt ill on Nov. 13th, but continued at work until the 14th, and on the following day he consulted a medical man. The same evening he was admitted into the Bristol General Hospital, where he was found to have an anthrax pustule on the right side of the cheek, and where he died on the 16th. The jury returned a verdict that the deceased died from anthrax poisoning, but how contracted there was no evidence to show.

DINNER TO MR. JAMES HARDIE, F.R.C.S. ENG.—Mr. Hardie, who has recently retired from the acting staff of the Royal Infirmary, Manchester, was entertained at dinner on Nov. 8th by his old house surgeons. Mr. Hardie had been full surgeon to the infirmary for 18½ years and of the 37 house surgeons who had served under him during that period 22 were present at the dinner. Dr. Joseph Clegg of Urmston presided, and in proposing the health of the guest of the evening he referred in suitable terms to the very high esteem in which, both as a surgeon and a friend, Mr. Hardie is held by all his former assistants. Mr. T. C. Orford acted as secretary.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, 37, Bedford-street, Strand, W.C. (CHARLES SCRIBNER'S SONS, New York.)

Studies in Physiological Chemistry, Sheffield Scientific School of Yale University, 1897-1900. Edited by R. H. Chittenden, Ph.D. Price 17s. net.

BAILLIÈRE, J. B., ET FILS, 19, rue Hautefeuille, Paris.

Sémiologie Pratique des Poumons et de la Plèvre, Signes Physiques, Inspection, Palpation, Percussion, Auscultation. By Henry Barbier, Médecin de l'Hôpital Hérold. Preface by M. le Professeur Grancher. Price 4 francs.

BONDI, GEORG, Berlin.

(Das Neunzehnte Jahrhundert in Deutschlands Entwicklung. Herausgegeben von Dr. Paul Schienther, K.K. Direktor des Wiener Hofburgtheaters. Band VI.). Geschichte der organischen Naturwissenschaften im Neunzehnten Jahrhundert. (Medizin und deren Hilfswissenschaften, Zoologie und Botanik.) By Dr. Franz Carl Müller of Munich. Price, paper M 10, cloth M. 12.50.

BERGMANN, J. F., Wiesbaden. (F. BAUERMEISTER, Glasgow.)

Beiträge zur Kenntniss der Lungentuberculose (Aus der Heilanstalt Hohenhonnef). Edited by Dr. Med. Ernst Meissen, dirigirendem Artze der Heilanstalt Hohenhonnef. Price M. 4.60, or 4s. 9d.

Der Einfluss des Alkohols auf den Organismus. By Dr. Georg Rosenfeld, Spezialarzt für innere Krankheiten in Breslau. Price M. 5.60 or 5s. 9d.

Die Griechischen Götter und die menschlichen Missgeburten. Lecture delivered to the Docentverein of Rostock University on May 3rd, 1901, by Professor Dr. Schatz, Geheimer Medicinalrath und Professor für Geburtshülfe und Frauenkrankheiten. Price M. 2.40, or 2s. 6d.

Grundriss der Kinderheilkunde mit besonderer Berücksichtigung der Diätetik. By Dr. Otto Hauser, Spezialarzt für Kinderkrankheiten in Berlin. Second revised edition. Price M. 8, or 8s.

Morphologie und Mechanismus der Skoliose. By Dr. Jakob Reilinger, Privatdozent an der Universität Würzburg. Price M. 4, or 4s.

Recepttaschenbuch für Kinder-Krankheiten. Compiled by Dr. Otto Seifert, Professor E.O. in Würzburg. Fourth edition. Price M. 3.20, or 3s. 3d.

Zur pathologischen Anatomie des kindlichen Alters. By Dr. A. Steffen of Stettin. Price M. 8, or 8s.

BLACKIE AND SON, Limited, London, Glasgow, and Dublin.

Carbineer and Scout. A Story of the Great Boer War. By E. Harcourt Burrage, author of "The Missing Million," &c. Price 2s. 6d.

With Roberts to Pretoria. A Tale of the South African War. By G. A. Henty, author of "With Buller in Natal," "In the Irish Brigade," &c. Price 6s.

Nonsense, Nonsense! Written by Walter Jerrold and pictured by Charles Robinson. Price 6s.

The Animal Book. By Fred Smith, author of "The Boyhood of a Naturalist." With a Coloured Frontispiece and 34 full-page Illustrations by F. Specht. Price 2s. 6d.

BLACKWOOD, WILLIAM, AND SONS, Edinburgh and London.

The End of an Epoch, being the personal narrative of Adam Godwin, the Survivor. By A. Lincoln Green. Price 6s.

DEACON, CHARLES WILLIAM, AND CO., Duke-street, Adelphi, W.C.

Part I., "Ugly," a Hospital Dog. Told by Himself. Part II., Recitations and Readings for Odd Hours. By George H. R. Dabbs, M.D. Price 1s.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin.

Die chronischen Nierenentzündungen in ihrer Einwirkung auf die Blutflüssigkeit und deren Behandlung. By Privat-docent Dr. H. Strauss, Assistent der III. medicinischen Universitätsklinik zu Berlin. Price M. 4.

Klinik der Verdauungskrankheiten. By Dr. C. A. Ewald. III Band. Die Krankheiten des Darms, und des Bauchfells. Price M. 14.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

Essentials of Diseases of the Nose and Throat, arranged in the form of Questions and Answers. By E. B. Gleason, S.B., M.D. Third edition, revised and enlarged. Price not stated.

Essentials of Gynecology, arranged in the form of Questions and Answers. By Edwin B. Cragin, M.D., of New York. Fifth edition, thoroughly revised by Frank S. Matthews, M.D., of New York. Price not stated.

A Manual of Obstetrics. By A. F. A. King, A.M., M.D., of Washington. Eighth edition, revised and enlarged. Price 12s. 6d. net.

A Clinical Manual of Skin Diseases, with special reference to Diagnosis and Treatment. By W. A. Hardaway, A.M., M.D., of St. Louis. Second edition, revised and enlarged. Price 10s. 6d. net.

LEWIS, H. K., 136, Gower-street, W.C.

A Text-book of Medicine for Students and Practitioners. By Dr. Adolf Strümpell, Professor and Director of the Medical Clinique at Erlangen. Third American edition, translated from the thirteenth German edition. By Herman F. Vickery, A.B., M.D., and P. C. Knapp, A.M., M.D., with editorial notes by F. C. Shattuck, A.M., M.D. Price 24s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

The Essentials of Chemical Physiology. For the use of Students By W. D. Halliburton, M.D., F.R.S. Fourth edition. Price 5s.

S. S. WHITE DENTAL MANUFACTURING COMPANY, Philadelphia, U.S.A

Studies of the Internal Anatomy of the Face. By M. H. Cryer M.D., D.D.S., Professor of Oral Surgery, Department o Dentistry of the University of Pennsylvania. Price not stated.

STEINHEIL, G., 2, rue Casimir-Delavigne, Paris.

Études Anatomiques sur les Grossesses Tubaires. By Dr. A Couvelaire, Chef de Clinique Obstétricale à la Faculté de Médecine de Paris. Price not stated.

UNWIN, T. FISHER, Paternoster-square, E.C.

"Prosperous" British India. A Revelation from Official Records By William Digby, C.I.E.. Price 12s. 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AMBROSE, P. J. A., has been appointed Certifying Surgeon under the Factory Acts for the West Drayton District of Middlesex.

ARMSTRONG, A. J. M., L.R.C.P. Edin., M.R.C.S., has been appointed Vaccination and Medical Officer for the Southgate Union.

BROWN, E. ARCHER, M.B. Edin., M.R.C.S., has been appointed Medical Officer to one of the Transvaal Concentration Camps.

CUTHBERT, W. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health under the Frinton-on-Sea Urban District Council.

DONALDSON, WILLIAM IRELAND, B.A., M.D. Univ. Dub., has been appointed Medical Superintendent to the London County Asylum, The Manor, Epsom.

KENNEDY, T., M.B., B.Ch., B.A.O. R.U.I., has been appointed Junior House Surgeon to the Miller Hospital and Royal Kent Dispensary.

LONG, SYDNEY H., M.B. Cantab., has been appointed Physician to the Jenny Lind Infirmary for Sick Children, Norwich.

NICHOL, F. E., M.B. Cantab., has been appointed Certifying Surgeon under the Factory Acts for the Margate District of Kent.

PEACOCK, C., M.B., B.Ch., B.A.O. R.U.I., has been appointed Senior House Surgeon to the Miller Hospital and Royal Kent Dispensary.

PERKINS, PHILIP MEYLER, M.B., B.S. Dunelm, M.R.C.S., has been appointed House Physician to the Sussex County Hospital, Brighton.

PITT, C. W., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for Malmesbury.

PRESTON, L. L., M.B. Durh., M.R.C.S., has been appointed Medical Officer of Health under the St. Helens Urban District Council.

REID, A. D., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Paddington Green Children's Hospital.

REID, R. WATSON, M.B., Ch.B., has been appointed House Physician to the Paddington Green Children's Hospital.

SECCOMBE, J. W. S., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Radcliffe Infirmary, Oxford.

SUMPTER, W. J. ERNELY, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health of the Sheringham Urban District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, Birmingham.—Clinical Assistant.

BETHLEM HOSPITAL.—Two Resident House Physicians for six months. Honorarium at rate of £25 each per quarter, with board and washing.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100, with board, residence, and washing.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80, with board and residence.

BURGH OF PAISLEY INFECTIOUS DISEASES HOSPITAL.—Resident Physician. Salary £100 per annum, with board, washing, and attendance.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer, unmarried. Salary £60 per annum.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, with prospect of increase, and apartments, board, attendance, and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

DOWN DISTRICT LUNATIC ASYLUM, Downpatrick.—Assistant Medical Officer, unmarried. Salary £150, increasing to £200, with apartments, board, washing, and attendance.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, washing allowance, and board and residence in the hospital.

KING'S COLLEGE, London.—Demonstrator of Pathology and Bacteriology.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST (In-patient Department, Bowdon, Cheshire).—Resident Medical Officer. Salary £100 per annum, with board, apartments, washing, and railway contract to Manchester.

METROPOLITAN ASYLUMS BOARD ASYLUM, Caterham, Surrey.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £170, with rations, lodging, attendance, and washing.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House Surgeon. Salary £120 per annum, with increase, and apartments, board, and washing.

NOTTINGHAM GENERAL HOSPITAL.—House Surgeon. Salary £100, rising to £120, with board, lodging, and washing.

NOTTS COUNTY LUNATIC ASYLUM, Sneinton, Nottingham.—Medical Superintendent, married. Salary £800 per annum, with house, coal, light, washing, and garden produce.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician, unmarried. Salary £110, with apartments, board, attendance, &c.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Small honorarium.

ROYAL HANTS COUNTY HOSPITAL.—House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

ROYAL HOSPITAL FOR INCURABLES, Donnybrook, Dublin.—Resident Medical Officer. Salary £100 per annum, with board and apartments.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Obstetric Tutor.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Resident Medical Officer. Salary 100 guineas per annum, increasing to 120 guineas, with apartments, attendance, coal, and light.

ST. THOMAS'S HOSPITAL.—Assistant Obstetric Physician.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—Second House Surgeon and Anæsthetist, unmarried. Salary £70 per annum, with board and residence.

SWANSEA GENERAL AND EYE HOSPITAL.—Resident Medical Officer. Salary £75 per annum, with board, apartments, washing, and attendance.

THROAT HOSPITAL, Golden-square, W.—Three Honorary Anæsthetists.

TOTTENHAM HOSPITAL.—House Surgeon. Salary £50 per annum, with board, residence, laundry, &c.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary £75 per annum, with board, residence, &c.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician; also House Surgeon for six months. Board and lodging are provided. Also Physician and Assistant Physician.

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer, unmarried. Salary £150, rising to £180, with board, residence, attendance, and washing.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies under the Factory Acts as Certifying Surgeons at Ulceby, in the county of Lincoln; at Tideswell, in the county of Derby; and at Warrington, in the county of Lancaster.

Births, Marriages, and Deaths.

BIRTHS.

BENHAM.—On Nov. 26th, at 72, Sackville-road, Hove, to Dr. and Mrs. Charles Benham, a daughter.

DRABBLE.—On Nov. 22nd, at the Manor House, Walton-on-Thames, the wife of George White Drabble, M.A., M.B., B.C. Cantab., of a daughter.

FERNANDES.—On Nov. 20th, at Ackworth, Yorkshire, the wife of Ramsden W. L. Fernandes, M.B., C.M. Edin., of a daughter.

ROGER-SMITH.—On Nov. 21st, at College-terrace, Hampstead, the wife of Hugh Roger-Smith, M.D. Lond., of a son.

WEAVER.—On Nov. 19th, at Yatton, Roe-lane, Southport, the wife of J. J. Weaver, M.R.C.S., L.S.A., of a son.

MARRIAGES.

MCLOUGHLIN—HARRISON.—On Nov. 21st, at St. Mary's, Great Chart, Kent, Captain George Somers McLoughlin, D.S.O., R.A.M.C., to Audrey Katharine, eldest daughter of the Rev. Alban H. Harrison, Rector of Great Chart.

RYALL—COLLIER.—On Nov. 23rd, at St. George's Church, Hanover-square, W., Charles Ryall, F.R.C.S., to Frances Mary, younger daughter of the late Thomas Collier, J.P.

ZIMMERMANN—WATLING.—On Oct. 26th, at Holy Trinity Church, Murree, Punjab, India, Major B. F. Zimmermann, R.A.M.C., to Ethel Marian, eldest daughter of the late Colonel J. T. Watling.

DEATHS.

BAILEY.—On Nov. 24th, at Ampton-street, W.C., John Andrew Bailey, M.R.C.S., L.S.A., aged 72 years.

KING.—On Nov. 25th, at Boyfield House, Moulton, Spalding, Robert King, M.B. Cantab., F.R.C.P. Lond., aged 59 years.

PRINCE.—On Nov. 25th, at 10, Warwick-road, Maida Hill, W., after a short illness, Arthur Prince, M.R.C.S., L.R.C.P., in his 67th year.

WILDBORE.—On the 26th inst., at his residence, 2, Brunswick-road, Hove, Sussex, Frederick Wildbore, second son of the late Robert Wildbore, of Tilton-on-the-Hill, Leicestershire, late Assistant Surgeon, Coldstream Guards, aged 79 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

WHO SHOULD PAY THE FEE?

To the Editors of THE LANCET.

SIRS,—I should be glad of your valuable opinion in the following case. A man, living with his wife and two children in furnished apartments, called and asked me to go and see his landlord who, he thought, had scarlet fever. But he, the landlord, being of the "Peculiar" faith, would have no dealings with a medical man and no medicine, but trusted to prayers and fruit. I refused to go and see the case unless the landlord sent for me himself, and advised the lodger to report the matter to the medical officer of health. The lodger came back to me and said that the landlord consented to see me. I went and found that he was suffering from a bad attack of measles and broncho-pneumonia. I gave orders that someone should come at once, it being night, and fetch some medicine from my surgery. I blamed them for not sending before, and told them that if anything happened the responsibility would rest with them and not with me. They did not send for the medicine. I went next morning and found the patient still very bad, but he had had a better night after applications to the chest. I then said that I could do no good by looking at him and that unless I could give medicine I must decline to call—unless they sent for me. They did not send for me. 1. Was I right in not attending first message? 2. Am I right in not calling again? Can I recover fees for night and morning attendances?

I am, Sirs, yours faithfully,

Nov. 27th, 1901. BRIDGE.

*** It seems to us that our correspondent has throughout acted properly. 1. The first call to the patient came from the lodger, and, in face of the patient's known objection to receiving medical attention, could hardly be regarded. A patient in extreme danger can be treated willy nilly, but it is impossible for a medical man to visit professionally a person who, being in full possession of what wits Providence has given him, declines to be visited. 2. When the patient disregarded the instructions given to him and failed to send for the medicine the medical man was right to decline further attendance. No purpose is served by giving instructions that are not obeyed, but it is proper and humane to make it clear that the medical man will again take charge of the case when the patient signifies willingness to comply with the treatment. 3. We are not quite sure from our correspondent's letter if the patient sent for him. But if he did, of course he should pay for such attendance as he received up to the time when the medical man was compelled to relinquish the case.—ED. L.

DRUGGIST, DISPENSING CHEMIST, OR PHARMACIST?

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 23rd, p. 1464, under "Short Notes, Comments, &c.," I notice that you say that all druggists should make a habit of returning prescriptions, &c. Do you not think it would be better to call a dispensing chemist a "pharmacist" instead of a druggist? There is considerable difference between a druggist and a chemist and druggist. A druggist vends drugs without any legal qualifications whatever; members of our corporation who have an exceedingly severe pupilage and stringent examination to pass before qualifying to dispense try to raise its tone, and the word "Pharmacist" is more appropriate to use, as in France the "*Pharmacien*." I am afraid that your note would lead your readers to suppose that any druggist, or vendor of herbs, &c., is qualified to dispense physicians' prescriptions, which are invariably returned to the patient by a pharmacist. I trust that you will be able to find space for this reply, which is of some moment to we poor "pharmacists."

I am, Sirs, yours faithfully.

J. C. CROYDEN
(John D. Marshall, Succr.).

Wigmore-street, W., Nov. 23rd, 1901.

WANTED—A SUGGESTION FOR TREATMENT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me some suggestion as to treatment during the attack in a patient suffering from bronchial asthma for the last two or three years? He is a lad who is little removed from a state of chronic invalidism and has periodic attacks of a very severe nature. These sometimes last for two or three days, during which there are acute exacerbations of most distressing dyspnœa. He has been under my care for about six months and I have been in the habit of injecting quarter-grain doses of morphia, either alone or with $\frac{1}{100}$ grain of atropine. I frequently at the same time relieve the immediate urgency of the symptoms by chloroform inhalations. I may say that I have given iodide of potassium a good trial between the attacks. I have also put him upon a vegetable diet with a modicum only of meat. He has been taking malt and cod-liver oil. There is considerable emphysema, consequent, I take it, upon the asthma. Now, I cannot think that it is a good thing to keep giving this young man morphia each time that he has an attack, not to mention the chloroform, and I am somew hat driven into a corner if I hold my hand with these two remedies which certainly give prompt relief. Now it has occurred to me that oxygen gas might be of some use, and it may be that some of your readers have tried it. If they have done so, would they be kind enough to give me the results of their experience? I am bound to confess that it would be somewhat empirical to give this gas, as everyone knows the lungs are, as it were, already overfull of air of some sort, and it is rather the difficulty of expiration than that of getting air in which is the chief matter in an asthmatical attack. But still there is at the same time such obvious faulty aeration of the blood, as evidenced by the cold sweat and pale colour of the face, that I think it is quite possible oxygen might have a beneficial effect. Should this be so and should it be capable of cutting short the attack we are straightway possessed of a much more satisfactory therapeutic agent than either the morphia or the chloroform. Thanking you in anticipation, should you be able to find a place for the above.

I am, Sirs, yours faithfully,

Nov. 28th, 1901. M.B. LOND.

MEDICAL WITNESSES' FEES.

To the Editors of THE LANCET.

SIRS,—Would you kindly inform me in your next issue in Answers to Correspondents whether a surgeon subpœnaed by the Crown in a criminal case is entitled to a fee and expenses before he may be sworn, and, if so, to how much?

I am, Sirs, yours faithfully,

Nov. 29th, 1901. T. G.

*** We think that the fee and expenses may be claimed before the witness is sworn, but the amount to be claimed depends upon the nature of the court.—ED. L.

AN EIGHTEENTH-CENTURY PRESCRIPTION FOR THE BITE OF A MAD DOG.

IN the sixth volume, just issued by the Historical Manuscripts Commission, of the report on the manuscripts of the Duke of Portland, K.G., preserved at Welbeck Abbey, appears the following letter from George Harbin to the Earl of Oxford at Wimpole:—

"Dec. 19, 1732.

"About a fortnight ago Lord Portmore, having been bit by a mad dog, came to this town to consult Dr. Mead, who has disciplined him according to the annexed receipt. His Lordship continues very well, without the least sign that the bite is like to have any consequences.

"Dr. Mead's prescription: Let him lose 10 ounces of blood from the arm. Then take of grey ground liver wort (*Lychen cinereus sylvestris*) one drachm in powder, and of black pepper one scruple in half a pint of cow's milk every morning, to four doses. He must also go into a cold spring every morning for a month together, dipping all over, and staying in about a minute; and then three times a week for a fortnight after."

It may be assumed that the bite did not have "any consequences," as Lord Portmore's name appears in a list of Lord Oxford's visitors in Dover-street about 18 months later—i.e., July 12th, 1734.

THE LONDON M.D. EXAMINATION.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me as to the best books to read for the London M.D. examination, more especially on psychology and mental diseases?

I am, Sirs, yours faithfully,

Nov. 23rd, 1901. M. W.

FRIENDLY SOCIETIES AND THEIR MEDICAL AID INSTITUTIONS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 16th, p. 97, there appears an advertisement asking medical men who intend applying for the medical officership of the Rotherham Friendly Societies Medical Aid Association to communicate firstly with the advertiser. Probably this is the outcome of some differences between the medical men and clubs in the district. Will you permit me to explain briefly "the meaning of," and legal position of, a "friendly societies medical institution"? Where there has been some disagreement between clubs and their various medical officers, or where, as often happens, the clubs think that they will get better medicines and better attention if they engage a medical man who will agree to give his *whole* time to the members, the clubs then form an institution in this way. Firstly, the clubs must all unanimously agree to the scheme; having done so, one intelligent, business-like man is selected by each club to represent that club at the yearly meeting. Now suppose that there are 40 or 50 clubs, then out of these 40 or 50 delegates, as they are called, 18 are elected to form a monthly management committee. The 18 members include a secretary, treasurer, two trustees, and two auditors. They then proceed to "register the institution under the Friendly Societies Act" and at once secure a medical officer, or medical officers, according to their membership. Every penny received by the institution committee from the lodges connected with it, and every penny spent by them in salaries, drugs, horse-hire, repairs, &c., must be clearly shown on the balance-sheet tabulated by the secretary of the institution, verified by the auditors, then submitted

to the Government Auditor at Somerset House, and must finally have the seal of the Registrar-General of Friendly Societies affixed, *showing that it has received his approval.* I should like to show this advertiser and other medical men who do not exactly understand the strong position these places hold that these institutions enjoy many little concessions which they might well envy. I will name three or four. We are exempt from all income-tax upon the very premises we occupy, and upon our savings. We are exempt from postage in any business correspondence between the institute and the Registrar-General. Bills we pay by cheque are "unstamped cheques"; and, further, we can pay or receive amounts over £2 on unstamped cheques or receipts. In fact, once an institution is formed and properly registered, *there is no medical man, however great and influential, there is no medical body such as the local medico-chirurgical society or medical union that can upset or in any way interfere with its legitimate work and influence.* There are scores of institutions all over the country, and these have a registry at York. On the register are names of well-qualified men ready to fill up a vacancy or take up a new position. Many are married assistants anxious to secure a resident's post, as this means a good house free of all rates; coals, lights, &c., and £280 to £350 per annum, all drugs, and dispenser and conveyance are found him. Sir W. Foster and Dr. J. G. Glover saw clearly how intensely foolish it would be to attack these places. There is nothing whatever illegal in a body of men getting the *exclusive* services of a medical gentleman if they so desire. In conjunction with thousands of my brother Oddfellows I want to see a better spirit exist between clubs and their surgeons. I have always held that our surgeon is worthy of *respectful* and *liberal* treatment and a *free hand*, and while saying this I would like to point out to the gentleman whose advertisement appears in THE LANCET of Nov. 16th that if he is anxious to prevent the establishment of an institution in his district or to prevent the institute getting a medical officer he had better firstly set about to destroy the Act of Parliament which legalises the existence of these places and the Act which gives to the management and members very many concessions which medical men and other institutions will never enjoy.

I am, Sirs, yours faithfully,

Nov. 20th, 1901. C. W.

A CASE OF MALINGERING.

To the Editors of THE LANCET.

SIRS,—The rascal with the laparotomy scar (see THE LANCET of Nov. 9th, p. 1314, and 23rd, p. 1463) was in Addenbrooke's Hospital last September after an alleged injury to his abdomen. He passed blood in his urine, vomited, sweated, and registered a high temperature. He became so outrageous in his language and violent in his ways that he was considered to be a lunatic. Having threatened the life of the house surgeon he was removed to Fulbourn Asylum. On his discharge from the asylum he obtained 10s. on false pretences from a charitable society. The man was a terror to the nurses and a nuisance to the staff.

I am, Sirs, yours faithfully,

Cambridge, Nov. 26th, 1901. GEORGE WHERRY.

THE INFECTIVE PERIOD IN MUMPS.

To the Editors of THE LANCET.

SIRS,—The duration of infection in mumps is a subject on which medical men do not seem to agree. I should like to have opinions from some of your readers. In a recent outbreak of mumps in a school with both boarders and day pupils some of the parents were annoyed that different practitioners gave varying periods for isolation. One said 14 days, another 21 days. My belief is that both of these periods are too short, but it is difficult to prove. The incubation period is, of course, easy to determine, and that often is as much as from 21 to 23 days. I am told that in a Board School some few miles from here during a recent epidemic children were allowed to attend school while there were cases in their homes and that children were also permitted to return to school 10 days from the onset of an attack. It has been my custom hitherto not to let children from an infected house mix with others, but possibly this is unduly strict. Of course it is not satisfactory that one boy is thought free from infection in 10 days and another not for four weeks. Had there been any persistent glandular swelling one might understand the discrepancy, but such was not the case.—I am, Sirs, yours faithfully,

Nov. 22nd, 1901. A. C. WILSON, M.B., Ch.B. Vict.

INNOVATIONS IN CYCLING.

To the Editors of THE LANCET.

SIRS,—As doubtless many practitioners, like myself, have taken up cycling as a means of health and recreation, I should like to draw the attention of my brethren of the wheel to the advantages which I have derived from the adoption of long cranks and high gear, as advocated, I believe, by Colonel Crompton. Much against my will I was persuaded last summer to order a new bicycle fitted with eight-inch cranks and 81-inches gear, my previous machine having six-and-a-half-inch cranks and 66½-inch gearing. The result has been to me a pleasant revelation, as with this new machine I could go faster with less exertion, climb hills with greater ease, and accomplish long journeys—over 70 miles—with less sense of fatigue and stiffness than I had ever done before. Apart from this the maintenance of high speed with the slow leisurely movements of the legs, is very pleasant compared with the hurry-scurry of the quick revolutions of the pedals, which are neither pleasant nor dignified. In fact, long cranks and high gear have given me quite a fresh interest in cycling and have had the effect of reviving a waning enthusiasm for the pastime. I had been told that high gears are only for the strong and that long cranks are impossible without a proportionate length of leg. But among those who corroborate in every particular my favourable experience with long cranks and high gear are persons of both sexes, of all heights, and varying degrees of strength and muscular power. The strange part of it, however, is that though the advantages are manifest to all who give them a trial, there is only one firm who recommend long cranks and build special frames with long wheel base for the accommodation of the extra length of crank.

I am, Sirs, yours faithfully,

West Norwood, S.E., Nov. 25th, 1901. J. A. AUSTIN, M.D. Aberd.

"INOCKILATION."

To the Editors of THE LANCET.

SIRS,—The inclosed notice which I have copied may be of special interest at this time. I am, Sirs, yours faithfully,

Highbury New-park, N., Nov. 22nd, 1901. J. LANGTON HEWER.

[INCLOSURE.]

Notice appearing in the *Oxford Journal* of Feb. 25th, 1758:—

"February the 11th, 1758.

"I, George Ridler near Stroud in the County of Gloster Broadweaver at the desier of peepel hereabout do give Nautis That I have Inockilated these too Seazons past between 2 and 300 for the Smale Pox and but too or three of them died—A mainy peepel be a feared of the thing but evaith it is No More than Scrattin a bit of a haul [in their Yarn A pushin in a peece of Skraped rag dipt in Sum of the Pocky Matter of a Child under the distemper——That Every body in the Nashion may be sarved I Will God Willin Undertake to Inockillat them with the pervizer they will take too Purges before hand and loose a little blud away, for half a Crown a head; And I will bould to say Noo body goes beyond me.

"N.B. Poor Volk at a Shillin a head but all Must pay for the Purgin."

ANTI-RHEUMATIC RINGS.

To the Editors of THE LANCET.

SIRS,—Some of your numerous readers must have come across patients wearing "anti-rheumatic" rings, and I dare say they have, in common with me, classed those ornaments with the raw potato in the pocket, the silk string round the wrist, and the innumerable other amulets for the cure of this difficult complaint. An intelligent and thoughtful patient, however, tells me that the ring is supposed to draw "acid crystals" from the blood, and hence its power. He showed me a brown powder that he had scraped from the inside of the ring, and this had accumulated in a single night, and he suggested that this powder was similar to the chalk stones that had formed at his finger-joints. Such an action did not seem impossible, although such a chemical action is not likely. One could not help suggesting that two rings, or even a cuirass, or panoply, of the metal would in that case be even more efficacious in bad cases. To set his mind at rest, and to satisfy my own curiosity, I submitted the scrapings to Mr. Stoddart, Public Analyst for Bristol, and I inclose a copy of his reply, which may be of interest to some of your readers.

I am, Sirs, yours faithfully,

Ilfracombe, Nov. 26th, 1901. O. CLAYTON JONES, M.B. Oxon.

[COPY.]

F. Wallis Stoddart, F.I.C., F.C.S.,
Public Analyst for City and County of Bristol,
Lecturer in University College, Bristol.
Western Counties Laboratory, Bristol,
Nov. 25th, 1901.

SIR,—I have examined the powder received from you on the 16th inst. and find that it consists practically entirely of hydrated ferric oxide, and, so far as the limited quantity of material would allow me to determine, contained no other metal. I could obtain no well-marked reaction for uric acid and as the tests for this substance are very delicate, it may be concluded that the quantity present, if any, must be exceedingly minute—less, indeed, than I should have anticipated in the case of rust formed in contact with the human skin. Of course, it is possible that the ring you describe is composed of more than one metal and that the most oxidisable one undergoes the greatest amount of change.

Yours faithfully,
(Signed) F. WALLIS STODDART.

Dr. O. Clayton-Jones, Ilfracombe.

*** An analysis of a similar ring was made in THE LANCET Laboratory and was published in our issue of March 2nd, 1901, p. 676.—ED. L.

DOUBTFUL COMPLIMENTS.

To the Editors of THE LANCET.

SIRS,—My attention has been called to a note in THE LANCET of Nov. 23rd, p. 1463, in which you state with reference to my recently issued invitation to yourself and others to spend a week in Grindelwald or Rome, that "you do not think it right for a tourist agency to

conduct its business in this manner." Your criticism would have had more weight if you had explained the grounds upon which it is founded. You admit yourself that the conditions of the offer are perfectly above-board, and that we "make it quite clear why this offer is made." The calculation which you make is not fair to us. The advantage which we offer to medical men is that if they pay the price of an ordinary return ticket, they will receive, without any further cost to them, the following accommodation: in the case of the Italian tour, one day's hotel accommodation at Turin, 9*s.* 9*d.*, and seven days' *pension* in Rome, amounting in all to about £3 5*s.* In the case of Grindelwald, seven days' *pension* at 8*s.* a day—i.e., £2 16*s.* As we state frankly that our object is to induce medical men who are often asked to recommend the best method of travelling for invalids, to test the advantages of our arrangements, and as we offer a real reduction, the value of which is clearly set forth in the conditions of the invitation, I fail to see what grounds you have for your criticism. I should have been very grateful for the gratuitous advertisement you have given me if you had refrained from charges which you cannot substantiate. I am, Sirs, yours faithfully,

Euston, N.W., Nov. 25th, 1901. HENRY S. LUNN, M.D. Dub.

*** We fail to see in what way our calculation is unfair. Dr. Lunn's card states: "The invitation is strictly personal and cannot be transferred or extended to members of the guests' families, who must pay the ordinary rates of £17 17*s.* first-class ..... for the Rome tour." The "invitation" price for a first-class return tour to Rome is £16 1*s.* 8*d.*, and therefore the advantage of an invitation measured in money is £1 15*s.* 4*d.* As we read the card the £17 17*s.* includes hotel accommodation as much as does the £16 1*s.* 8*d.*, for Dr. Lunn states that £16 1*s.* 8*d.* is the rate at which an ordinary return ticket can be purchased. The object of the offer is evidently to induce medical men to advertise to their patients the advantages of Dr. Lunn's system. If medical men think it desirable to do this they may be trusted to do it without the offer suggested in the invitations.—ED. L.

LIP-READING.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you will kindly tell me through the columns of THE LANCET the best book from which "lip-reading" can be learnt, the price of the book, and where it can be obtained.

I am, Sirs, yours faithfully,

Nov. 26th, 1901. BOGIE.

*** The most recent books on Lip-reading are by Miss Isabel Pollock (Simpkin, Marshall, and Co., Paternoster-row, London, E.C., price 6d.), and by Miss Boultbee, Member's Mansions, Victoria-street, London, S.W.—ED. L.

REVACCINATION.

To the Editors of THE LANCET.

SIRS,—I believe it is necessary for public vaccinators to vaccinate infants in *four places*. Does this also apply to revaccinations? Your opinion would oblige. I am, Sirs, yours faithfully,

Nov. 19th, 1901. CALF.

*** Although the Local Government Board have not regarded it necessary to issue instructions in respect of the number of insertions of lymph to be aimed at in revaccination, we believe that the Board expect public vaccinators to perform this operation as thoroughly as in the case of primary vaccinations.—ED. L.

Fairplay.—There is no harm in sending the circular as is suggested to the local medical men, but precautions will have to be taken in the matter of the wording. It must be made clear that the patients remain under their own medical men while a portion of their treatment is in "Fairplay's" hands.

Bacillus.—Many such leaflets are published. Our correspondent might apply to the National Society for the Prevention of Consumption and Other Forms of Tuberculosis, 20, Hanover-square, London, W.

W. H. B.—No general rules can be laid down, but if our correspondent will state a particular case and the details are of sufficient medical interest we will endeavour to help him.

Practice.—Division of money earned or taken during the introduction period must be made the subject of special arrangement. No general rules can cover all cases.

Orthodox.—If our correspondent will forward a bottle of the preparation which he mentions we shall be happy to examine it.

Brussels.—We do not know.

ERRATA.—In the annotation headed "The Antitoxin Treatment of Diphtheria at Leicester" which appeared at p. 1433 in our issue of Nov. 23rd, the date of the issue of the *Weekly Times and Echo* from which we quoted should have been *Nov. 2nd* and not "Sept. 22nd."—On p. 544 of our issue of August 24th, col. 1, line 15 from foot, the word "Alimentary" in the title of Dr. J. Rivière's paper should be omitted.—In col. 2, in Dr. Rivière's remarks, the words "He used even more powerful currents than did Mr. Williams" should be omitted.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Aberdeen Daily Journal, Modern Society, Liverpool Courier, Warrington Observer, Hereford Journal, Wilts Standard, Stirling Observer, Hampstead Express, Sussex Daily News, Eastern Morning News (Hull), Hampshire Advertiser, Blackburn Telegraph, Ilkeston Pioneer, Nelson Chronicle, Norwich Press, Weymouth Times, Stalybridge Standard, Evening Standard, Oxford Times, South Africa Daily Telegraph, Sanitary Record, Kentish Mercury, Mining Journal, Hertfordshire Mercury, Dorset County Chronicle, City Press, Le Courrier de la Presse (Paris), Local Government Chronicle, Surrey Advertiser, Halifax Guardian, Local Government Journal, Ipswich Journal, Ormskirk Advertiser, Fife Journal, Jersey Express, Eckington Express, Boston Independent, Weekly Free Press and Aberdeen Herald, Devon Evening Express, Evening News (Portsmouth), Daily Express (London), Ramsgate Gazette, South Wales News, Reading Mercury, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 28th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall	Solar Radia. in Vacuo.	Maximum Temp. Shade	Min Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 22	29·88	S.W.	0·07	53	49	46	45	47	Overcast
,, 23	30·39	N.E.	0·12	64	45	35	35	36	Overcast
,, 24	30·56	S.W.	...	66	42	33	32	34	Foggy
,, 25	30·60	E.	...	58	44	34	33	35	Hazy
,, 26	30·48	E.	...	53	46	35	40	43	Cloudy
,, 27	30·39	N.E.	0·01	57	48	41	41	42	Cloudy
,, 28	30·27	NNW	...			42	42	44	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

SATURDAY (7th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (2nd).—OTOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—4.30 P.M. Annual Meeting. Election of Officers and Council for the next session. Cases and Specimens will be shown by Mr. R. Lake, Dr. Cobbledick, Dr. W. Milligan, Dr. D. Grant and Mr. C. A. Ballance, Mr. C. A. Ballance, Dr. H. Tilley, Mr. F. C. Abbott, Dr. U. Pritchard, Mr. C. H. Fagge, Mr. L. A. Lawrence, Dr. G. Cathcart and Mr. C. A. Ballance, and Mr. A. Cheatle.

ROYAL BRITISH NURSES' ASSOCIATION (10, Orchard-street, W.).—5.30 P.M. Address:—Dr. Jane Walker: The Open-air Treatment of Consumption.

SOCIETY OF ENGINEERS (Royal United Service Institution, Whitehall).—7.30 P.M. Paper:—Mr. H. A. Roechling: The Sewage Question during the last Century.

TUESDAY (3rd).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Mr. H. T. Butlin will open a Discussion on Lymphadenoma in its Relation to Tuberculosis. Dr. F. W. Andrewes, Prof. J. McFadyean, Dr. L. Dickinson, Mr. Foulerton and others will take part.

WEDNESDAY (4th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by the President (Dr. Horrocks), Mr. Maxwell, Dr. Wilson, Dr. A. Routh, Dr. Stannus (introduced by Dr. Tate), and Dr. Lockyer. Dr. Griffith will show a Person of Uncertain Sex. Paper:—Dr. R. Sanderson: A Case of combined Vaginal and Abdominal Hysterectomy for a Pregnancy of four and a half months complicated by Cancer of the Cervix.

THURSDAY (5th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Mr. C. W. Mansell Moullin: Some Unusual Effects of Moveable Kidney.

CHILDHOOD SOCIETY (Library of the Sanitary Institute, Margaret-street, W.).—8 P.M. Lecture.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. J. H. Edwards: Bullets and their Billets: Experiences with X Rays in South Africa.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital).—4 P.M. Clinical Cases.

FRIDAY (6th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—8.30 P.M. Clinical Meeting.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Dr. J. F. Goodhart: General Practice and Original Research. (Purvis Oration.) Conversazione. Exhibitions of Lantern Views of Foreign Health Resorts, Electrical and Scientific Apparatus, Surgical Instruments, Therapeutic Preparations, Diabetic Foods, &c.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases will be shown by Mr. Lawrence, Mr. Lake, Dr. Kelson, Dr. Horne, Dr. Potter, and Mr. Waggett.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (2nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Galloway: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Lloyd: Anæsthetics in Rectal Operations.

TUESDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Medical Anatomy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Mr. Horsley: Surgery of the Nervous System.

WEDNESDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Harrison: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Eccles: Surgical Anatomy.

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Mr. A. Thorne: Minor Operations and Manipulative Methods (Post-Graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Acland: Bronchiectasis.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. P. Jakins: Diseased Conditions seen with the Laryngoscope.

THURSDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Robinson: Uterine Hæmorrhage.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Hutchison: Medical Consequences of Adenoid Vegetations.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Wallis: Demonstration of Surgical Cases. (Post-Graduate Course.)

FRIDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. St Clair Thomson: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Skin Cases.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Mr. R. J. Albery, Lond.; Messrs. Allen and Hanburys, Lond.; Association of Public Vaccinators of England and Wales, Lond., Organising Secretary of; Messrs. R. Anderson and Co., Lond.; Anglo-American and Continental Pharmaceutical Co., Lond.

B.—Mr. C. J. Bond, Leicester; Dr. J. Braithwaite, Leeds; Dr. G. H. Broadhurst, Manchester; Mr. J. B. Bannolkar, Ahmedabad; Mr. F. Barraclough, Leeds; Dr. J. Brookhouse, Nottingham; Mr. G. Brown, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. S. H. Benson, Lond.; Messrs. Bedford and Co., Lond.; Mr. C. L. Bedford, Birmingham; Messrs. C. Baker and Sons, Lond.; Messrs. Baillière, Tindall, and Cox, Lond.; Bristol Eye Hospital, Secretary of.

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